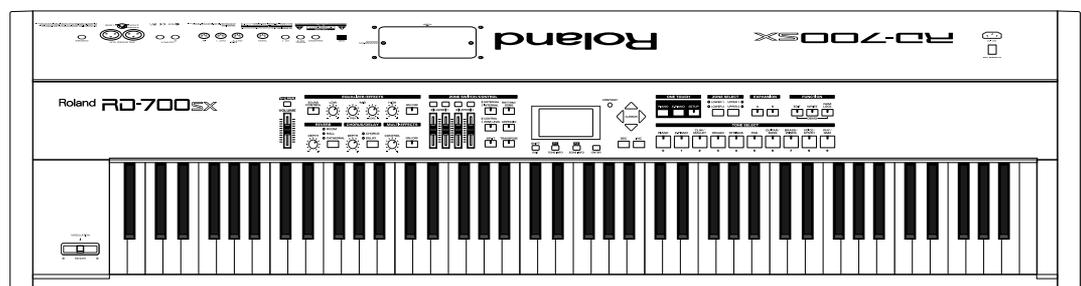# Roland®

# RD-700sx

# Owner's Manual

Thank you, and congratulations on your choice of the Roland Digital Piano RD-700SX.

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (p. 2), "USING THE UNIT SAFELY" (p. 3), and "IMPORTANT NOTES" (p. 5). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

# IMPORTANT SAFETY INSTRUCTIONS
# SAVE THESE INSTRUCTIONS

# USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices

| ⚠ **WARNING** | Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly. |
|---|---|
| ⚠ **CAUTION** | Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. <br><br> * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets. |

About the Symbols

| ⚠ | The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger. |
|---|---|
| ⊘ | The ⊘ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled. |
| ⬤ | The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet. |

----------------------------------- **ALWAYS OBSERVE THE FOLLOWING** -----------------------------------

## ⚠ WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

...............................................................................

- Connect mains plug of this model to a mains socket outlet with a protective earthing connection.

...............................................................................

- Do not open or perform any internal modifications on the unit. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 15 .)

...............................................................................

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

...............................................................................

- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

...............................................................................

- This unit should be used only with a rack or stand that is recommended by Roland.

...............................................................................

## ⚠ WARNING

- When using the unit with a rack or stand recommended by Roland, the rack or stand must be carefully placed so it is level and sure to remain stable. If not using a rack or stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling.

...............................................................................

- The unit should be connected to a power supply only of the type described in the operating instructions, or as marked on the rear side of unit.

...............................................................................

- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.

...............................................................................

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

...............................................................................

- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

...............................................................................

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

...............................................................................

**3**

## ⚠ WARNING

- Immediately turn the power off, remove the power cord from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The power-supply cord, or the plug has been damaged; or
  - If smoke or unusual odor occurs
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

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- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

.......................................................................................

- Protect the unit from strong impact.
  (Do not drop it!)

.......................................................................................

- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

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- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

.......................................................................................

- Always turn the unit off and unplug the power cord before attempting installation of the circuit board (SRX Series; p. 15 ).

.......................................................................................

- DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.

.......................................................................................

- Do not put anything that contains water (e.g., flower vases) on this unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.

.......................................................................................

## ⚠ CAUTION

- The unit should be located so that its location or position does not interfere with its proper ventilation.

.......................................................................................

- This (RD-700SX) for use only with Roland stand KS-17. Use with other stands (or carts) is capable of resulting in instability causing possible injury.

.......................................................................................

- Always grasp only the plug on the power-supply cord when plugging into, or unplugging from, an outlet or this unit.

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- At regular intervals, you should unplug the power plug and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.

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- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

.......................................................................................

- Never climb on top of, nor place heavy objects on the unit.

.......................................................................................

- Never handle the power cord or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.

.......................................................................................

- Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices.

.......................................................................................

- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (p. 23 ).

.......................................................................................

- Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet.

.......................................................................................

- Install only the specified circuit board(s) (SRX Series). Remove only the specified screws (p. 15 ).

.......................................................................................

- Should you remove the screws fastening the board slot cover, keep them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

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# IMPORTANT NOTES

In addition to the items listed under "IMPORTANT SAFETY INSTRUCTIONS" and "USING THE UNIT SAFELY" on pages 3 and 4, please read and observe the following:

## Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.

- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

- Although the LCD and LEDs are switched off when the POWER switch is switched off, this does not mean that the unit has been completely disconnected from the source of power. If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet. For this reason, the outlet into which you choose to connect the power cord's plug should be one that is within easy reach and readily accessible.

## Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.

- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.

- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

- Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.

## Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.

- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

## Repairs and Data

- Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up in another MIDI device (e.g., a sequencer), or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

## Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory in another MIDI device (e.g., a sequencer).

- Unfortunately, it may be impossible to restore the contents of data that was stored in another MIDI device (e.g., a sequencer) once it has been lost. Roland Corporation assumes no liability concerning such loss of data.

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.

- Never strike or apply strong pressure to the display.

- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.

- A small amount of heat will radiate from the unit during normal operation.

- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).

- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Use only the specified expression pedal (EV-5/7; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

## Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

# Main Features

## Progressive Hammer Action

The RD-700SX incorporates Roland's "progressive hammer action keyboard," which realistically reproduces the comfortable, natural touch of the grand piano. While offering excellent responsiveness and quiet action, this keyboard also reproduces the subtle changes in touch as you move from the lower to the higher registers. Additionally, the progressive hammer action keyboard features an environmentally friendly design, with absolutely no lead used in the hammers.

## New Piano Tones

The instrument features newly developed, authentic piano tones with wide dynamic range and rich expression. Great for any musical genre or scene, whether it be performing with a band or playing a solo ballad, the RD-700SX is the perfect stage piano.
Additionally, The instrument features an 88-note multisampled piano painstakingly recorded by professional engineers. It boasts not only tonal quality but also a high level of presence, making it closer than ever to the "real thing."
It is also furnished with a wealth of electronic piano, organ, string, synth pad, and other Tones that allow you to use the instrument as a stage piano. Once you try it onstage, you'll come to fully understand its capabilities.

## Exclusive Piano Functions

The "Piano Edit" function allows you to program subtle changes for the piano and electric piano tones (p. 73).

## A Full 128 Voices

The RD-700SX features 128-voice polyphony, with all sounds available in every performance mode. Enjoy natural performances even when layering multiple sounds.

## Simple Push-Button Operation

You can access Split, Effects and carry out other main operations simply by pressing a single button (p. 12).
Furthermore, pressing the ONE TOUCH [PIANO] button lets you immediately switch to the settings most suited for piano performances, regardless of the mode or settings currently in effect (p. 32).

## High-Quality Effects

In addition to two multi-effects systems, you can also use the reverb and chorus individually. The instrument also realistically reproduces the tonal changes of an acoustic grand piano, including the change in resonance created by pressing the damper pedal (p. 75) and the degree of openness of the grand piano's lid (p. 74). Moreover, the Sound Control function (p. 44) and digital equalizer (p. 45) enable a wide range of tonal adjustments.

## Equipped With Organ Tone Wheel Sound Generator

For organ Tones, the RD-700SX comes equipped with an organ Tone wheel sound generator used in the Roland Combo Organ. This sound generator lets you recreate organ sounds, changing the level of each footage (p. 54).

## Rhythm and Arpeggiator Functions

You can play back Rhythm patterns and perform arpeggios with the press of a single button.
Enjoy a variety of performance techniques, with backing using realistic drum sounds for a real session feel, arpeggios and cutting you get just by playing the chords, and more (p. 46,p. 48).

## Fast MIDI Control

You can also control various functions, such as adjusting volume levels and selecting Tones, simply and easily from an external MIDI device. This provides fast and intuitive control when using the keyboard on stage (p. 60).

## Interface for Full Connectivity

The RD-700SX comes equipped with a USB port for connecting to computers. You can use this to perform with MIDI data received from the computer and to save the RD-700SX's setup files.
Additionally, two separate MIDI OUT ports allow you to control two different MIDI sound modules simultaneously.
On top of all this, the RD-700SX XLR connectors provide balanced output to connected audio gear, enabling you to supply stable audio output.

## Expandability

You can install up to two Wave Expansion Boards, a favorite for use with Roland's SRX Series.
Starting with the "SRX-02 Concert Grand" Tone, you can enjoy performing with the most up-to-date Tones available as they are continually released (p. 15).

## Sophisticated Design

With its black body, the RD-700SX offers the perfect look and presence on stage. The panel's refined design enhances operability, while rear cable connections are a cinch.
In addition, the cover to the wave expansion board is designed so it won't easily fall off even if the screws are removed.

## SMF Play Function

The RD-700SX is compatible with both General MIDI and General MIDI 2 standards. Additionally, you can transmit SMF music files to the RD-700SX from the USB port and play back the data. This allows you to perform while playing back SMF music files without the use of an external sequencer.

### Convention Used in This Manual

- Words enclosed in square brackets [ ] indicate panel buttons. Example: [SPLIT] indicates the SPLIT button.
- (p. **) indicates a reference page
- The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.

# Contents

# Contents

# Contents

# Panel Descriptions

## Front Panel
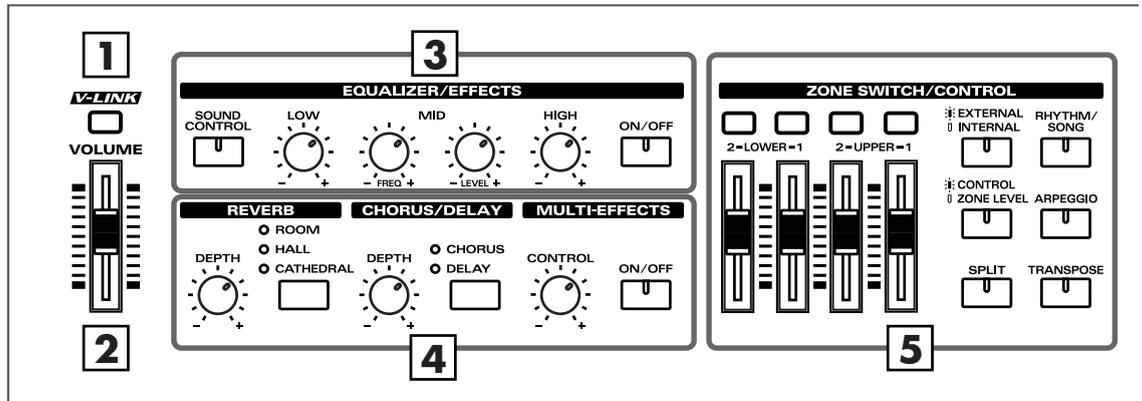


### 1. [V-LINK]

Switching this on lets you control external V-LINK compatible video equipment connected to the RD-700SX (p. 97).

### 2. VOLUME Slider

Adjusts the overall volume that is output from the rear panel OUTPUT jacks and PHONES jack (p. 24).

### 3. EQUALIZER/EFFECTS

**[SOUND CONTROL]**

Switching this on reduces inconsistencies in the volume and produces a more stable, coherent sound (p. 44).

**[LOW] knob**

Adjusts the sound's low-frequency range (p. 45).

**[MID FREQ] knob**

Adjusts the midrange frequencies (p. 45).

**[MID LEVEL] knob**

Adjusts the sound's midrange-frequency range (p. 45).

**[HIGH] knob**

Adjusts the sound's high-frequency range (p. 45).

**[ON/OFF]**

Turns the equalizer on/off (p. 45).

### 4. REVERB, CHORUS/DELAY, MULTI-EFFECTS

**REVERB [DEPTH] knob**

Adjusts the amount of reverb (p. 43).

**[REVERB]**

Changes the reverb type (p. 43).

**CHORUS/DELAY [DEPTH] knob**

Adjusts the amount of chorus (p. 43).

**[CHORUS/DELAY]**

Changes the chorus type (p. 43).

**MULTI-EFFECTS [CONTROL] knob**

Adjusts the way that effects are applied (p. 52).

**MULTI-EFFECTS [ON/OFF]**

Switches the multi-effects on/off (p. 52).

### 5. ZONE SWITCH/CONTROL

**ZONE SWITCH**

Turns each part's sound on and off (p. 41).

**ZONE LEVEL slider**

Adjusts the volume level for each part (p. 41).

When [EXTERNAL/INTERNAL] is on, this controls each part for the external MIDI sound generator (p. 64).

In addition, when [CONTROL/ZONE LEVEL] is on, the tone is changed in real time in response to the assigned parameter and function.

**[EXTERNAL/INTERNAL]**

Puts the RD-700SX in control of the external MIDI sound generator (p. 60).

**[RHYTHM/SONG]**

Switches RHTYHM and SONG on/off (p. 48, p. 50).

**[CONTROL/ZONE LEVEL]**

This determines the function of the ZONE LEVEL sliders (p. 85).

**[ARPEGGIO]**

Switches Arpeggiator on/off (p. 46).

**[SPLIT]**

Puts the keyboard in "Split mode," wherein you can use more than one tone by having different tones play in different parts of the keyboard (p. 38).
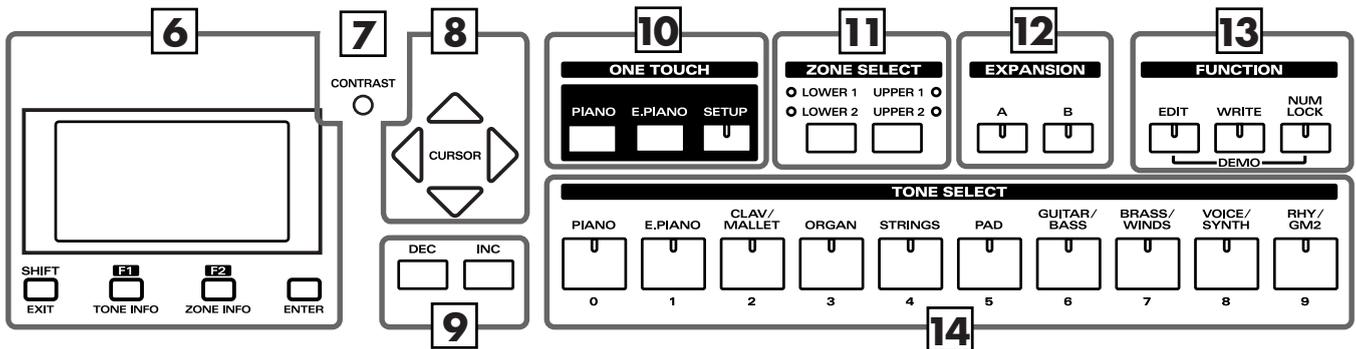
**[TRANSPOSE]**

Sets the range of the keyboard to transposed (p. 42).

**6. DISPLAY**

This shows the Tone names and the values of various settings, etc.

**[SHIFT/EXIT]**

Pressed to return to a previous screen or to cancel a procedure that is in progress.

Additionally, you can easily call up Edit screens for related parameters for the following functions by holding down this button while pressing buttons, turning knobs, or operating other controllers (p. 155).

**[F1/TONE INFO]**

This allows you to change the tone settings (p. 70).

You can also use this to assign functions in some screens.

**[F2/ZONE INFO]**

This allows you to change the zone settings (p. 68).

You can also use this to assign functions in some screens.

**[ENTER]**

This is used to finalize a value or execute an operation.

**7. CONTRAST knob**

Adjusts the display's contrast (p. 26).

**8. CURSOR [ ◀ ], [ ▲ ], [ ▶ ], [ ▼ ]**

Press these to switch pages and to move the cursor.

**9. [DEC], [INC]**

This is used to modify values.

If you keep on holding down one button while pressing the other, the value change accelerates.

**10. ONE TOUCH**

**[PIANO]**

Selects the optimum settings for piano performances (p. 32).

**[E.PIANO]**

Selects the optimum settings for E.piano performances (p. 32).

**[SETUP]**

Calls up the stored settings (Setup) (p. 56).

**11. ZONE SELECT buttons**

Selects the zone for which the tone is to be selected (p. 40).

**12. EXPANSION [A], [B]**

This selects a sound from a wave expansion board, sold separately (p. 35).

**13. FUNCTION**

**[EDIT]**

Press this button when you wish to adjust various settings (p. 78).

**[WRITE]**

Stores the current settings to "Setup" (p. 58).

**[NUM LOCK]**

You can input numerical values with the TONE SELECT buttons when this button is lit (p. 34).

In addition, you can listen to the demo songs by simultaneously pressing this button and [EDIT] (DEMO PLAY) (p. 31).

**14. TONE SELECT buttons**

Pressed to select tones (p. 33).

You can also input numerical values with these buttons when the [NUM LOCK] button is on. [NUM LOCK] turns on automatically in the Edit and other screens, enabling input of numerical values with the buttons.
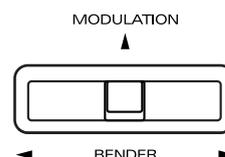


**Pitch Bend/Modulation Lever**

This allows you to control pitch bend or apply vibrato (p. 44).

# Rear Panel
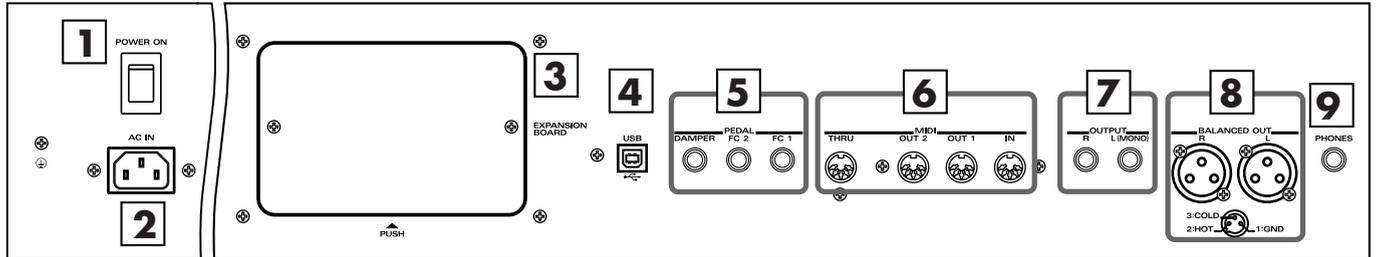


### 1. [POWER ON] Switch

Switch turns the power on/off (p. 23).

### 2. AC Inlet

Connect the included power cord to this inlet (p. 21).

### 3. Wave Expansion Board Installation Slot

Remove the cover for installation of optional wave expansion boards
(SRX Series) (p. 15).

### 4. USB Connector

Connect your computer here to exchange Standard MIDI file and
setup file between the computer and the RD-700SX (p. 104).

### 5. PEDAL Jacks (DAMPER, FC1, FC2)

Connecting the pedal switch (DP series) provided with the RD-
700SX to the DAMPER jack allows you to use the switch as a damper
pedal.

With a pedal connected to the FC-1 or FC-2 jack, you can then assign
a variety of functions to the pedal (p. 70, p. 84).

### 6. MIDI Connectors (IN, OUT1, OUT2, THRU)

Used for connecting external MIDI devices and for transmission of
MIDI messages (p. 60, p. 91, p. 101).

### 7. OUTPUT L (MONO)/R Jacks

Provide output of the audio signals. These are connected to an amp
or other device. For monaural output use the L/MONO jack (p. 21).

### 8. BALANCED OUT L/R Jacks

Connectors for balanced output of the audio signals. Connect to
mixers and other such gear (p. 21).

### 9. PHONES Jack

A set of headphones can be connected to this jack (p. 21).

Even when headphones are connected, sound will still be output
from the OUTPUT jacks.

# Getting Ready

## Installing the Wave Expansion Board

Up to two optional Wave Expansion Boards (SRX Series) can be installed in the RD-700SX.

Wave Expansion Boards store Wave data, Patches, and Rhythm Sets, and by equipping the RD-700SX with these boards, you can greatly expand your sound palette.

For more information about the wave expansion board tones, refer to the patch list included with the wave expansion board. However, some of the tone names may be displayed differently on the RD-700SX. Check 36page as you refer to the tone names.

### Cautions When Installing an Wave Expansion Board

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.

  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.

  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.

- Use a Philips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.

- To remove a screw, rotate the screwdriver counter-clockwise. To tighten a screw, rotate the screwdriver clockwise.

  loosen ( ⊕ ) tighten

- Be careful that the screws you remove do not drop into the interior of the RD-700SX.

- Do not leave the rear panel cover removed. After installation of the Wave Expansion Boards is complete, be sure to replace the cover.

- Do not touch any of the printed circuit pathways or connection terminals.

- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.

- When circuit board installation is complete, double-check your work.

- Always turn the unit off and unplug the power cord before attempting installation of the circuit board.

- Install only the specified circuit board(s) (SRX Series). Remove only the specified screws.

- Be careful not to cut your hand on the edge of the installation bay.

Install the Wave Expansion Boards after removing the rear panel cover.

There are two slots (A and B) into which a board can be installed. Specify which slot's board is to be used by pressing EXPANSION [A] or [B] on the front panel when using waves, tones, or Rhythm Sets from the wave expansion boards.

## Installing SRX Series Boards

### 1

**Before installing any Wave Expansion Board, turn off the power on the RD-700SX and all devices connected to it.**

### 2

**Refer to the following illustration of the RD-700SX's rear panel, and remove the screws indicated. Then, remove the cover.**

Screws to be removed

EXPANSION
BOARD
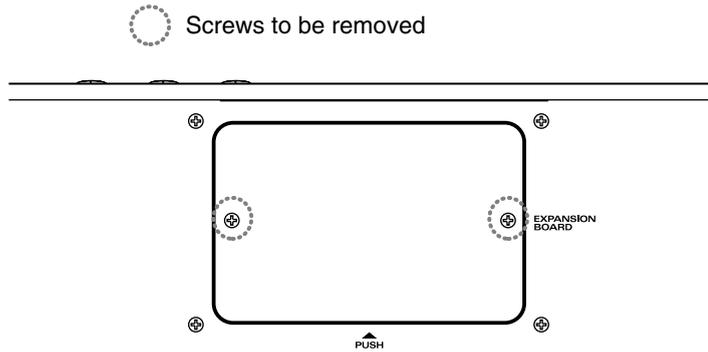
PUSH

You can remove the cover easily by pressing on the lower part of the cover (above

the PUSH mark).

push
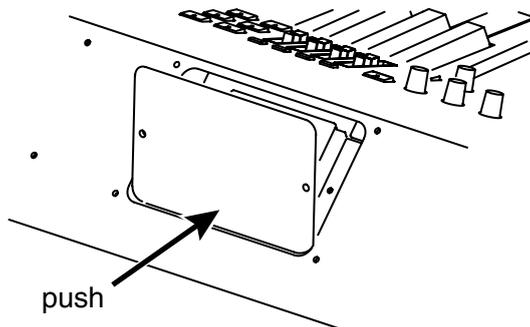
### 3

**Insert the Wave Expansion Board connector into a connector for an SRX Series slot (SRX A or SRX B), while simultaneously inserting the board holders into the holes in the Wave Expansion Board.**

Wave Expansion Board (SRX series)

Board holder

Position them as shown
before you install the board.

Connector
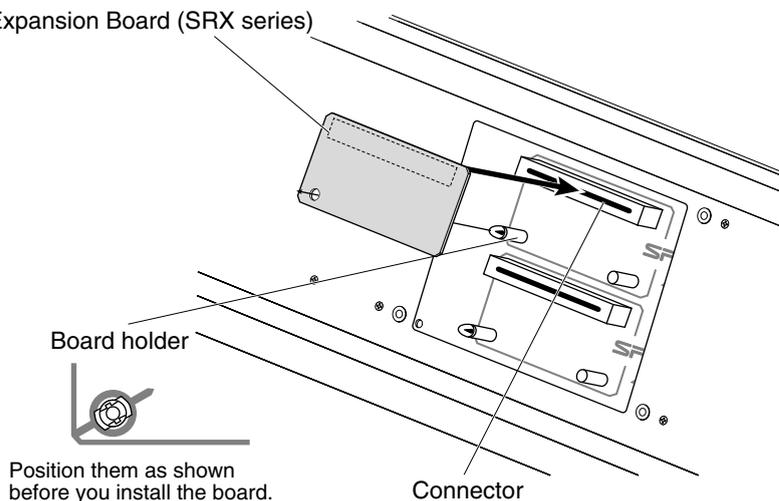
**NOTE**

If the same type of Wave Expansion Board is installed in the SRX A slot and the SRX B slot, it will only be possible to select data from the Wave Expansion Board that was installed in the SRX A slot.

**4**

**Use the Installation Tool supplied with the Wave Expansion Board to turn the holders in the LOCK direction, so the board will be fastened in place.**
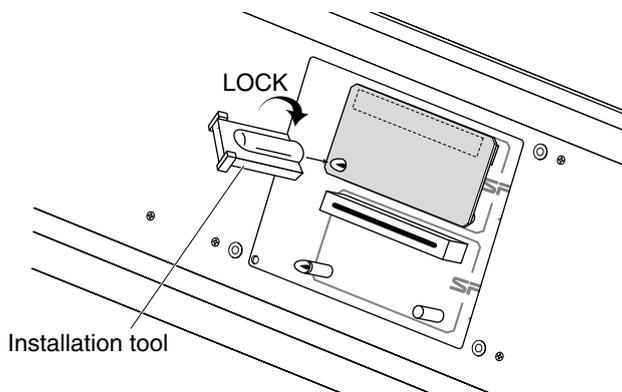


Installation tool

**5**

**Use the screws that you removed in step 2 to fasten the cover back in place.**

## Checking the Installed Wave Expansion Boards

After installation of the Wave Expansion Boards has been completed, check to confirm that the installed boards are being recognized correctly.
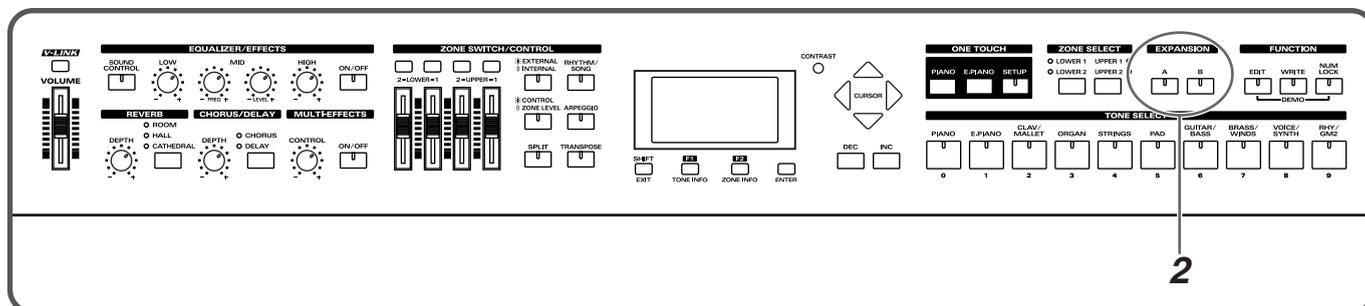


**1**

**Turn on the power, as described in "Turning On the Power" (p. 23).**

**2**

**The name of the installed wave expansion board is displayed for as long as EXPANSION [A] or [B] is held down.**

The number of tones and Rhythm Sets contained in the expansion board is displayed.

The example here depicts what you would see if the SRX-02 "Concert Piano" Wave Expansion Board were installed in the SRX A slot.

```
Expansion Board Info

A SRX-02ConcertPno
   Tone:    50
   Rhythm:   0
B ------------------
   Tone:    ---
   Rhythm:   -
```
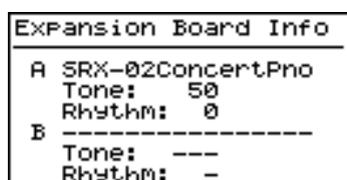
By releasing the button, you go back to the previous screen.

☞
**"Selecting Wave Expansion Board Tones"** (p. 35).

**NOTE**

If "------" appears next to the name of the slot in which the board was installed, it may be that the wave expansion board is not being recognized properly. Use the procedure in **"Turning Off the Power"** (p. 24) to turn the power off, then reinstall the wave expansion board correctly.

# Installation de la carte d'extension Wave(French language for Canadian Safety Standard)

Vous pouvez installer jusqu'a 2 cartes d'extension optionnelles dans le RD-700SX. Ces cartes d'extension memorisant des donnees Wave, des morceaux et des ensembles rythmiques, elles vous permettront d'augmenter considerablement le timbre.

Pour de plus amples renseignements sur les tonalités de la carte d'expansion Wave, se reporter à la liste des timbres incluse avec la carte. Toutefois, certains des noms de tonalités peuvent s'afficher différemment sur le RD-700SX. Consulter la p. 36 pour les noms des tonalités.

## Precautions lors de l'installation de la carte d'extension Wave

- Veuillez suivre attentivement les instructions suivantes quand vous manipulez la carte afin d'éviter tout risque d'endommagement des pièces internes par l'électricité statique.

  - Toujours toucher un objet métallique relié à la terre (comme un tuyau par exemple) avant de manipuler la carte pour vous décharger de l'électricité statique que vous auriez pu accumuler.

  - Lorsque vous manipulez la carte, la tenir par les côtés. Évitez de toucher aux composants ou aux connecteurs.

- Utiliser un tournevis cruciforme correspondant a la taille de la vis (un tournevis numero 2). En cas d'utilisation d'un tournevis inapproprie, la tete de la vis pourrait etre endommagee.

- Pour enlever les vis, tourner le tournevis dans le sens contraire des aiguilles d'une montre. Pour resserrer, tourner dans le sens des aiguilles d'une montre.

- Veillez a ne pas laisser tomber de vis dans le chassis du RD-700SX.

  desserrer ⟨ ⊕ ⟩ resserrer

- Ne pas laisser la plaque arriere detachee. Apres avoir installe la ou les carte(s) d'extension, bien remettre la plaque en place.

- Ne pas toucher aux circuits imprimés ou aux connecteurs.

- Ne jamais forcer lors de l'installation de la carte de circuits imprimés. Si la carte s'ajuste mal au premier essai, enlevez la carte et recommencez l'installation.

- Quand l'installation de la carte de circuits imprimés est terminée, reverifiez si tout est bien installé.

- Toujours éteindre et debrancher l'appareil avant de commencer l'installation de la carte.

- N'installez que les cartes de circuits imprimes specifiees (SRX Series). Enlevez seulement les vis indiquees.

- Installer les cartes d'extension apres avoir enleve la plaque arriere.

- Veillez a ne pas vous couper les doitgs sur le bord de l'ouverture d'installation.

  Avant d'installer la carte d'expansion Wave, retirer le panneau arrière.
  Il y a deux emplacements (A et B) dans lesquels une carte peut être installée. Spécifier l'emplacement à utiliser en appuyant sur EXPANSION [A] ou [B] sur le panneau avant lors de l'utilisation d'ondes, de tons ou de groupes rythmiques à partir des cartes d'expansion Wave.

## Installer les cartes de serie SRX

**1**

> **Avant d'installer une carte d'extension Wave, eteindre tous les appareils relies au RD-700SX.**

**2**

> **Detacher la plaque arriere en enlevant les vis indiquees sur le schema suivant.**

Vis à enlever

EXPANSION BOARD
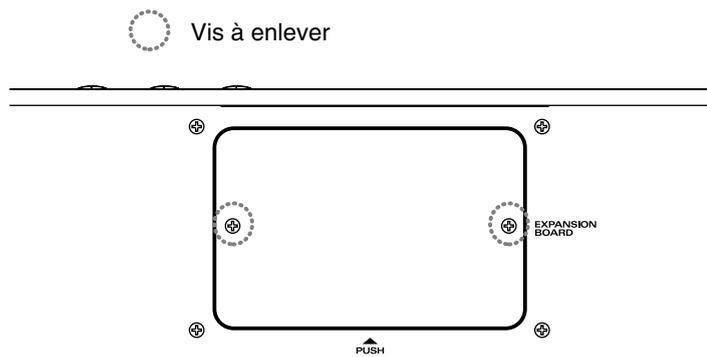
PUSH

Il est facile d'enlever le couvercle: il suffit d'appuyer sur la partie inférieure du couvercle (au-dessus du symbole PUSH ).

push
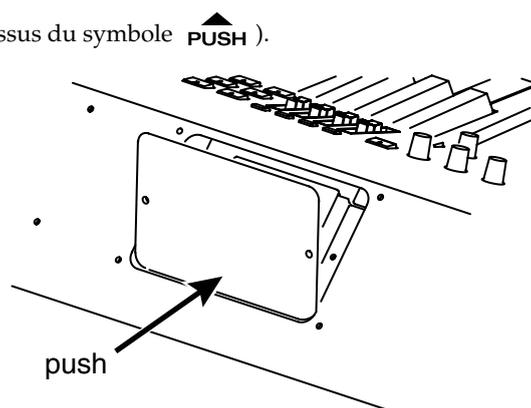
**3**

> **Inserer le connecteur de la carte dans un des creneaux pour la serie SRX (SRX A, SRX B) tout en enfoncant les supports a carte dans les trous de celle-ci.**

Carte d'extension Wave (serie SRX)
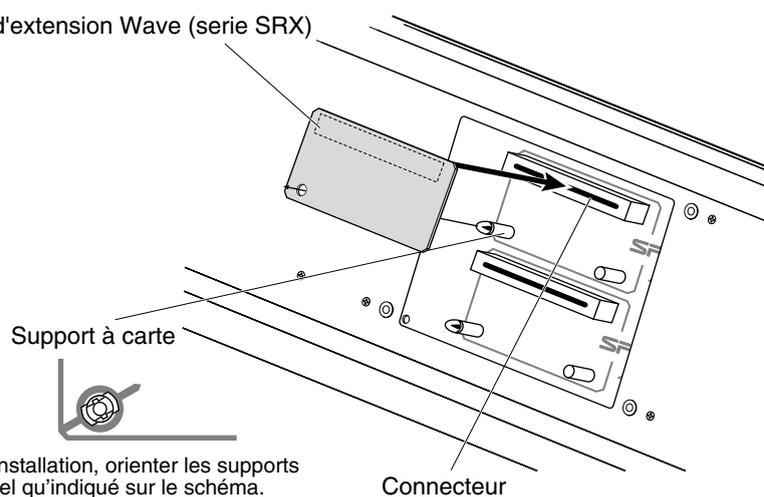
Support à carte

Avant l'installation, orienter les supports à carte tel qu'indiqué sur le schéma.

Connecteur

**4**

Pour tourner les supports en position LOCK (verrouille), utilisez l'outil d'installation de la carte d'extension fournie a cet effet. De cette facon, la carte sera bien fixee a sa place.

LOCK

Outil d'installation
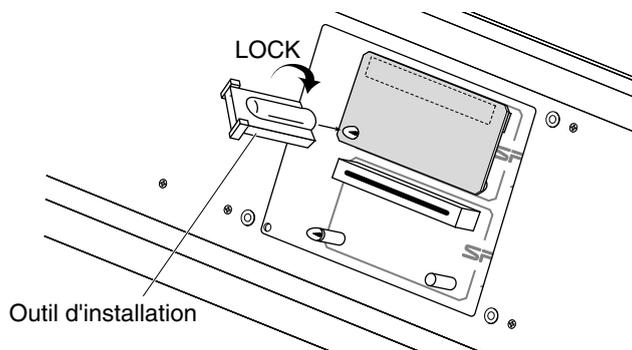
**5**

Reposez le couvercle en remettant les vis enlevees (comme specifie) a l'etape 2.

## Verification des cartes d'extension audio apres installation

Lorsque l'installation des cartes d'extension audio est terminee, proceder a une verification pour s'assurer que l'ordinateur les identifie correctement.

2
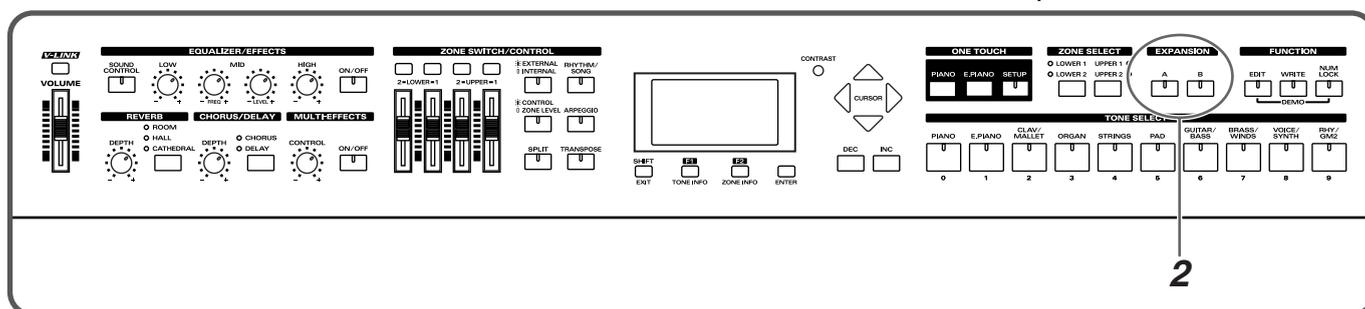
**1**

Mettre sous tension de la facon decrite sous "Turning On the Power" (p. 23).

**2**

Le nom de la carte d'expansion Wave installée s'affiche tant que la touche EXPANSION [A] ou [B] est tenue enfoncée.

Le nombre de tonalités et de groupes rythmiques compris sur la carte d'expansion s'affiche.

L'exemple montre ce qui serait affiche si la carte d'extension audio SRX-02 "Concert Piano"etait installee dans la fente SRX A.

```
Expansion Board Info

A SRX-02ConcertPno
    Tone:    50
    Rhythm:   0
B ------------------
    Tone:    ---
    Rhythm:   -
```

Lorsque vous le relacherez, vous serez ramene a l'ecran precedent.

---

**NOTE**

Si la meme sorte de carte d'extension Wave est installee dans les creneaux SRX A et SRX B, il ne sera possible de selectionner que les donnees de la carte d'extension Wave installee dans le creneau SRX A.

**NOTE**

Si "---------------" est affiche a cote du nom de la fente dans laquelle la carte est installee, il est possible que la carte d'extension audio installee ne soit pas reconnue correctement. Mettre hors tension de la facon decrite sous **"Turning Off the Power"** (p. 24) et reinstaller correctement la carte d'extension audio.

# Connecting the RD-700SX to External Equipment

The RD-700SX is not equipped with an amplifier or speakers. In order to produce sound, you need to hook up audio equipment such as a monitor speaker or a stereo set, or use headphones.

* *Audio cables, MIDI cables, USB cables, headphones, and expression pedals are not included. Consult your Roland dealer if you need to purchase accessories such as these.*

**NOTE**

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

to Power outlet

Computer

Pedal switch
(DP-2/8)

Expression pedal (EV-5/7)
or Pedal switch (DP-2/8)

Stereo
headphones

MIDI IN

MIDI IN

MIDI OUT

V-LINK-compatible
video equipment.

MIDI sound module etc.

MIDI sequencer etc.

Monitor speakers
(powered)

Mixer etc.

Power amp.
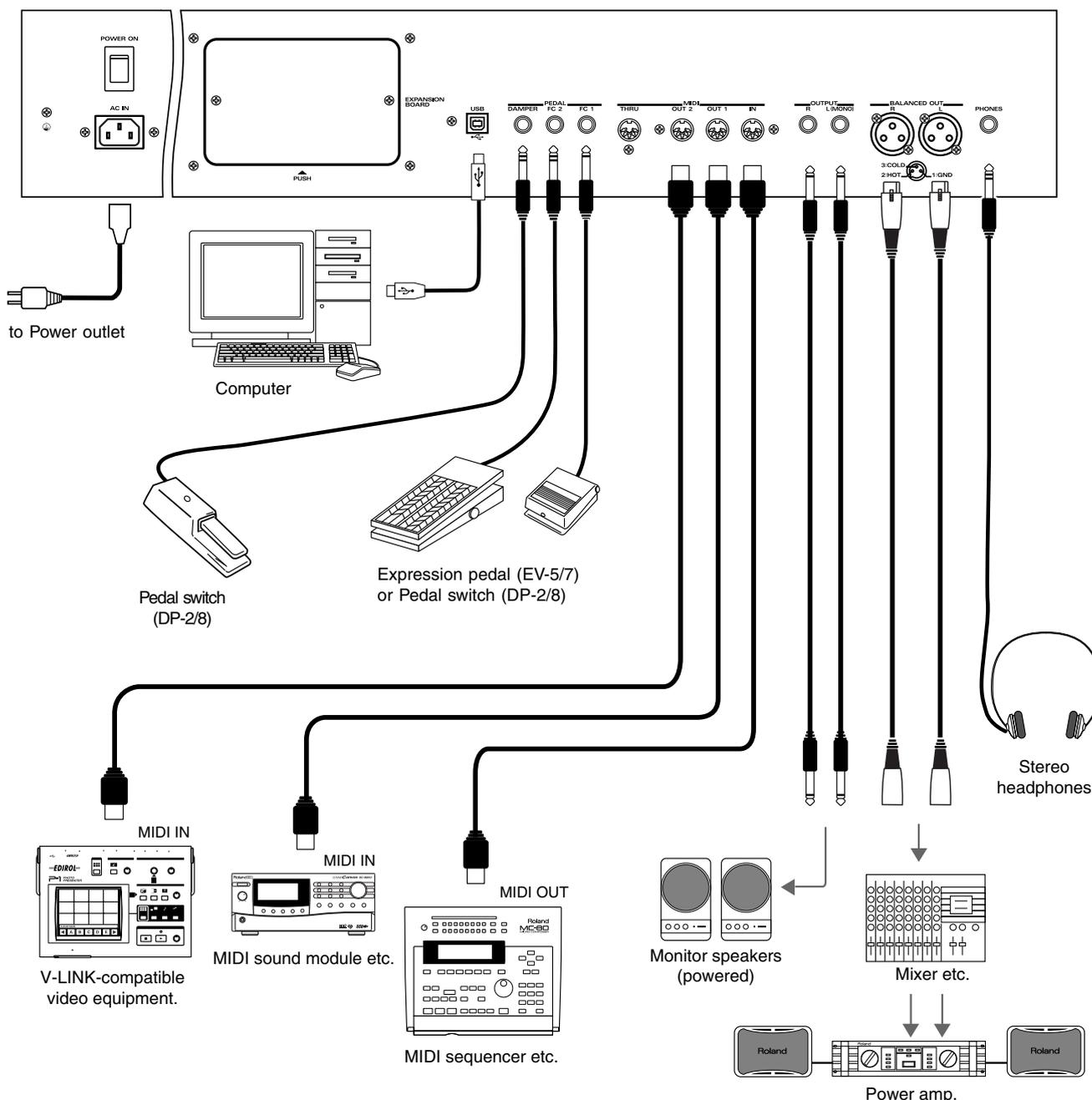
### 1

**Before you begin making connections, confirm the following.**

Is the volume level of the RD-700SX or connected amp turned all the way down?

Is the power to the RD-700SX or connected amp turned off?

### 2

**Connect supplied power cord to the RD-700SX, and plug the other end into an AC power outlet.**

### 3

**Connect the RD-700SX and the external device.**

Use audio cables to connect audio equipment, such as an amp or speakers. Use MIDI cables to connect MIDI devices. Use USB cables to connect computer.

If you are using headphones, plug them into the PHONES jack.

Connect pedal switches or expression pedals as necessary.

## Connecting Pedals

Connect the pedal included with the RD-700SX to one of the PEDAL jacks.

When connected to the DAMPER jack, the pedal can be used as a damper pedal.

Connecting the pedal to the FC-1 or FC-2 jack allows you to assign a variety of functions to the pedal (p. 70, p. 85).

### About the Output Jacks

This instrument is equipped with balanced (XLR) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.

```
            COLD
             o
             3
GND —[ o    o ]— HOT
      1      2
```

**NOTE**

Use Stereo headphones.

**NOTE**

Use only the specified expression pedal (EV-5/7; sold separately). By connecting any other expression pedal, you risk causing malfunction and/ or damage to the unit.

**NOTE**

Set the switch on the included pedal to "Continuous" when the pedal is connected.
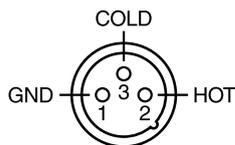
# Turning the Power On and Off

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

## Turning On the Power

**1**

**Before you switch on the power, move the volume down all the way by moving the VOLUME Slider.**

Also completely turn down the volume of any connected audio device and other equipment.
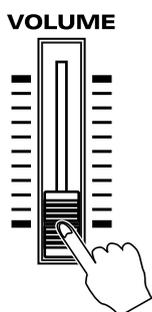
**VOLUME**

**2**

**Press the upper portion of the [POWER ON] switch on the back of the RD-700SX to turn on the power.**

The unit is powered up, and the display's backlighting comes on.

POWER ON

**3**

**Turn on the power to connected external devices.**

**4**

**Adjust the volume of the connected external device.**

**5**

**Adjust the RD-700SX's volume to obtain the proper volume level.**

**NOTE**

**In the unlikely event the power is turned off or cut off while Factory Reset (p. 22) is in progress, the data may become corrupted, and it may require additional time for the unit to start up the next time.**

**NOTE**

To prevent incorrect functioning of the Pitch Bend/Modulation Lever (p. 44), refrain from touching the lever while the power to the RD-700SX is turned on.

**NOTE**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

## Turning Off the Power

**1** Before you switch on the power, move the volume down all the way by moving the VOLUME Slider.

Also completely turn down the volume of any connected audio device and other equipment.

**2** Turn off the power to connected external devices.

**3** Press the lower portion of the [POWER ON] switch on the back of the RD-700SX.

The power is switched off.

**NOTE**

If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet.
Refer to **"Power Supply"** (p. 5).

# Adjusting the Volume
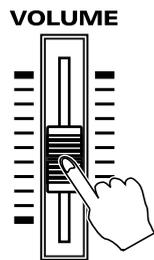
**VOLUME**

**1** Adjust the volume using the VOLUME slider.

Move the slider up to increase the volume, or down to lower it.

Also adjust the volume of the connected device to an appropriate level.

# Restoring the Factory Settings (Factory Reset)

When using the RD-700SX for the first time, start by returning the settings to their factory defaults so that the RD-700SX operates as described in the procedures in the owner's manual.

**NOTE**

Executing this operation deletes the Setup settings (p. 56). If you want to keep any internally stored content, use the "Bulk Dump (Bulk Dump SETUP)" procedure to save the data to an external sequencer (p. 99).

**NOTE**

**When making USB connections, be absolutely sure to disconnect the USB cable before starting.**



3,5,6,7    2,4    1

## 1
**Press [EDIT], getting the indicator to light.**

The Edit Menu screen appears.

```
=== EDIT MENU ===
0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
      ▼
```

**MEMO**

Instead of selecting with the CURSOR, you can press TONE SELECT [9] to display the Utility Edit screen directly.

## 2
**Press CURSOR [ ▼ ] to select "9.Utility."**
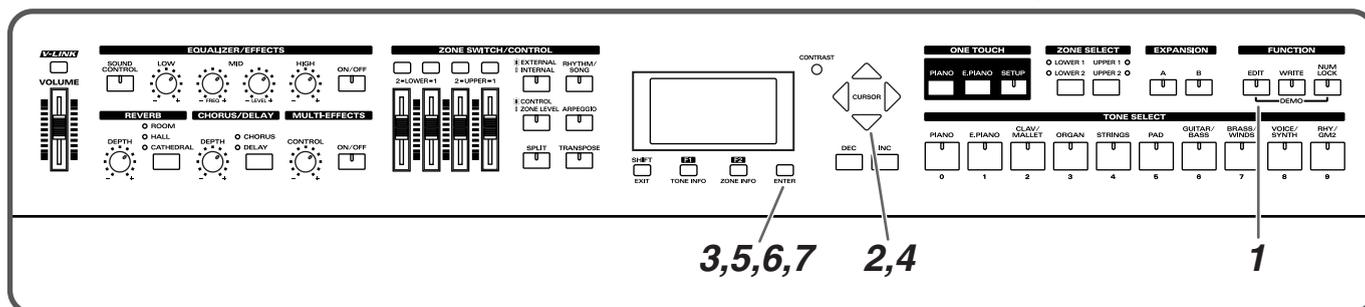
## 3
**Press [ENTER] to display the Utility screen.**

```
EDIT [Utility]
0.Rec Setting
1.Bulk Dump Temporary
2.Bulk Dump SETUP
3.Factory Reset Curnt
4.Factory Reset All
```
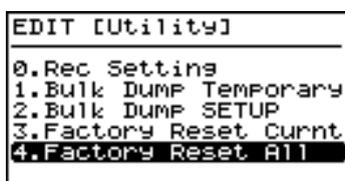
## 4
**Press CURSOR [ ▼ ] to select "Factory Reset All."**

## 5

**Press [ENTER].**

A screen like the one shown below appears.

```
Factory Reset All
─────────────────
Erases entire memory
content and restores
factory presets.

        OK?
```
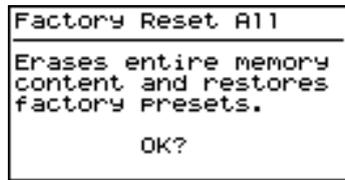
To cancel the Factory Reset, press [EXIT].

## 6

**Press [ENTER].**

The confirmation message appears.
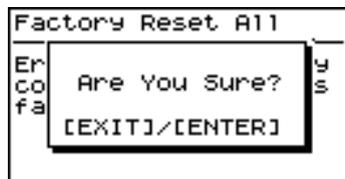
```
Factory Reset All
┌─────────────────┐
Er│  Are You Sure?  │y
co│                 │s
fa│  [EXIT]/[ENTER] │
  └─────────────────┘
```

To cancel the Factory Reset, press [EXIT].

## 7

**Press [ENTER] once again to start the Factory Reset operation.**

During the execution, "Executing... Don't Power OFF" appears in the display.

After the Factory Reset operation is finished, the ONE TOUCH screen will appear.

## 8

**Turn off the power to the RD-700SX, then turn it on again.**

You can also restore only part of the setting to their factory status. Refer to **"Restoring the settings to the factory condition (Factory Reset)"** (p. 100).

# Adjusting the Display Contrast (LCD Contrast)

The characters in the display may be difficult to view immediately after turning on the power or after extended use; this may also be because of where and how the display is situated.

In such instances, adjust the display contrast by turning the CONTRAST knob on the front panel.
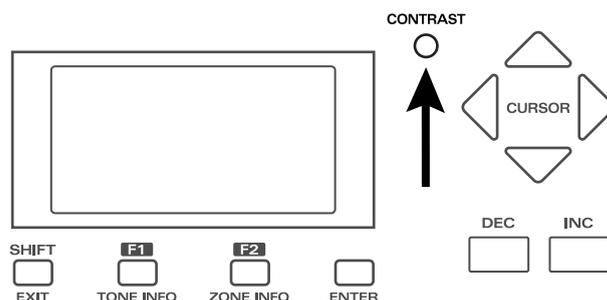
# Tuning to Other Instruments' Pitches (Master Tune)

For a cleaner ensemble sound while performing with one or more other instruments, ensure that each instrument's basic pitch is in tune with that of the other instruments. In general, the tuning of an instrument is indicated by the pitch in Hertz (Hz) of the middle "A" note.

This matching of other instruments' basic reference pitches is called "tuning."
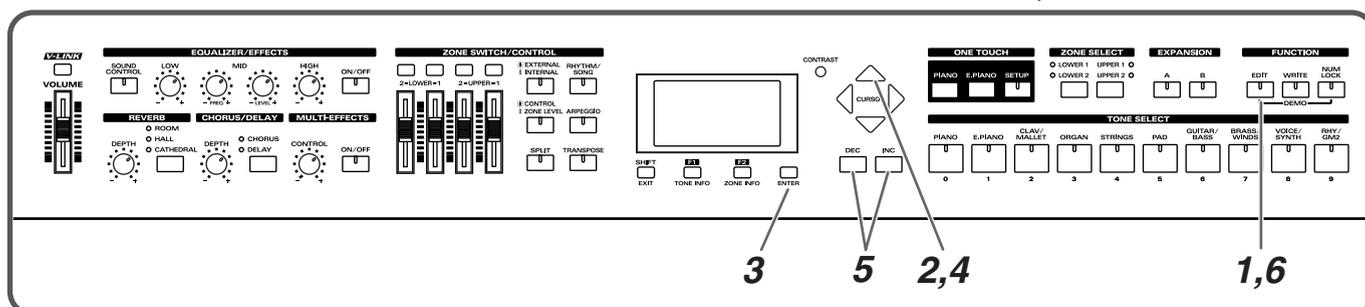
**1**

**Press [EDIT], getting the indicator to light.**

The Edit Menu screen appears.

```
=== EDIT MENU ===

0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
        ▼
```

**MEMO**

You can directly display the System Edit screen by pressing TONE SELECT [0] instead of selecting with CURSOR.

**2**

**Press CURSOR [ ▲ ] to select "0.System."**

**3**

**Press [ENTER] to display the Edit screen.**

```
EDIT [System]      ▶

Master Tune:   440.0Hz
Master Volume:     120
EQ Mode:         SETUP
Pedal Mode:      SETUP
Tone Remain:        ON
     WRITE
```

**MEMO**

For faster value increases, keep [INC] pressed down and press [DEC]. For decreasing value faster, keep [DEC] pressed down and press [INC].

**4**
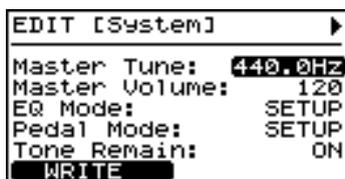
**Press CURSOR [ ▲ ] to move the cursor to the "Master Tune" parameter.**

**5**

**Press [INC]/[DEC] to select the value (415.3–440.0–466.2).**

**MEMO**

If you want to save this setting, press [F1(WRITE)]. Settings saved in the RD-700SX are not deleted even when the power is turned off.

**6**

**Press [EDIT] to make the indicator go dark.**

You are returned to the Tone screen.

# Overview of the RD-700SX

## Basic Organization of the RD-700SX

The RD-700SX can be divided into two sections: a keyboard controller section and a sound generator section. The two sections are connected internally by means of MIDI.
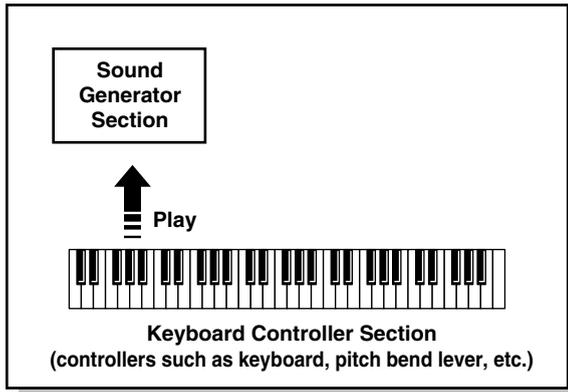


### Keyboard Controller Section

This section includes the keyboard, the Pitch Bend/Modulation Lever, the panel knobs, the sliders, and any pedal connected to the rear panel. Actions such as pressing and releasing of keys on the keyboard, depressing a pedal, and so forth, are converted to MIDI messages and sent to the sound generator section, or to an external MIDI device.

### Sound Generator Section

The sound generator section produces the sound. Here, MIDI messages received from the keyboard controller section or external MIDI device are converted to musical signals, which are then output as analog signals from the OUTPUT and PHONES jacks.

## Units of Sound

When using the RD-700SX, you will notice that a variety of different categories come into play when working with sounds. What follows is a simple explanation of each sound category.

### Tone

The individual sounds used when playing the RD-700SX are referred to as "Tones." The RD-700SX provides 488 types of Tones. Tones are assigned to each part.
The Tones also include various groups of percussion instrument assembled into "Rhythm Sets." Each key (note number) of a Rhythm Set will produce a different percussion instrument.

### Part

A sound generator of this type which can control multiple sounds using one device is referred to as a multitimbral sound generator. The RD-700SX contains a multitimbral sound generator capable of playing sixteen Tones simultaneously. "Parts" are where Tones that are created when the RD-700SX is used as a sound generator are assigned. Since different Tones can be assigned to each of the Parts and controlled individually, you can have multiple Tones play simultaneously, divide the keyboard into separate ranges and have different Tones sound in the different parts (Split), and enjoy playing ensemble performances.
The sixteen Parts played by the RD-700SX's internal sound generator are referred to as "Internal Parts."

### Zone

The RD-700SX features four Parts (UPPER1, UPPER2, LOWER1, and LOWER2) that you can use for freely controlling the Internal Parts with the RD-700SX's buttons and keyboard. These four Parts that are used for controlling the Internal Parts are collectively known as the "INTERNAL Zone." Four of the sixteen Internal Parts are assigned to the INTERNAL Zone for control (the RHYTHM Part is fixed at Part 10).
Furthermore, you can freely control external MIDI sound generators with the RD-700SX in the same manner as with the INTERNAL Zone. You can likewise control the external MIDI sound generator with the four Parts (UPPER1, UPPER2, LOWER1, and LOWER2), with this group of four Parts being referred to as the "EXTERNAL Zone." The external MIDI sound generator is assigned to these three Parts for control (the RHYTHM Part can also be partially set).

## Basic Operation

### Main Screens

### ONE TOUCH Screen

When ONE TOUCH [PIANO] or [E.PIANO] is pressed, setting the RD-700SX to the optimal status for piano performances, this screen is displayed.

## The Tone Screen (Basic Screen)

The names of the Tones currently selected for the INTERNAL Zone are displayed. This is the screen that is ordinarily displayed.
You can change the INTERNAL Zone (UPPER1, UPPER2, LOWER1, and LOWER2) Tones and tempo.

```
♩:120    TONE        ◀▶
UP1   001
Superior Grd 88
```
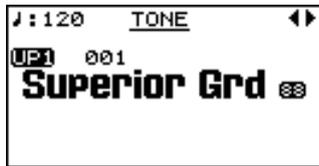
## The Tone Wheel Screen

In the Tone screen, when any ORGAN Tone "Tone Wheel 1-10" is selected for any of the INTERNAL Zone, this screen is

displayed when CURSOR [ ◀ ] is pressed. The mode when this screen is displayed is called "Tone Wheel mode," and while in this mode you can simulate the creation of sounds using an organ's harmonic bars (p. 53).

Pressing CURSOR [ ▶ ] when this screen is displayed returns you to the Tone screen.

```
♩:120              ◀▶
UP1   067 TW-Organ 5
<Perc>
 OFF
 Slow
        885344568
```
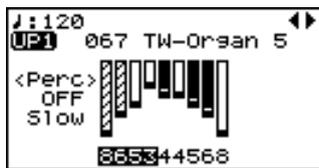
## The Setup Screen

The currently selected Setup is displayed (p. 56).

Pressing CURSOR [ ◀ ] when the Tone screen or Tone Wheel Screen is displayed switches the RD-700SX to this screen. You can also have this screen displayed by pressing [SETUP]. You can change the Setups (p. 46, p. 48, p. 50).

Pressing CURSOR [ ▶ ] when this screen is displayed returns you to the Tone screen or Tone Wheel Screen.

```
♩:120    SETUP       ▶
         000
RD SETUP
    BANK A
 ASSIGN    BANK CHANGE
```

## The Rhythm/Song/Arpeggio Screen

Pressing CURSOR [ ▶ ] when the Tone screen is displayed switches the RD-700SX to this screen.
You can change Song, Rhythm patterns, Arpeggio patterns, and the tempo.

Pressing CURSOR [ ◀ ] when this screen is displayed returns you to the Tone screen.

```
♩:120    RHY/ARP     ◀
RHY  001
R&B Pop 1
ARP  001
      Phrase  1
  SONG      PLAY
```

## EXTERNAL Screen

When [EXTERNAL/INTERNAL] is pressed, the button's indicator lights up, and the RD-700SX switches to the mode enabling it to control an external MIDI sound generator. The status of this button determines whether the RD-700SX's buttons are used to control the INTERNAL Zone ([EXTERNAL/INTERNAL] unlit), or to control the EXTERNAL Zone ([EXTERNAL/INTERNAL] lit).
In addition, you can make detailed settings for the MIDI messages to be transmitted to the external sound generator (p. 61).

```
♩:120 EXTERNAL ZONE  ▶
       OUT Ch MSB LSB PC
UP1   ALL  1 087 064 001
UP2   ALL  2 --- --- ---
LW1   ALL  3 --- --- ---
LW2   OFF  4 --- --- ---
    [MIDI OUT Port]
```
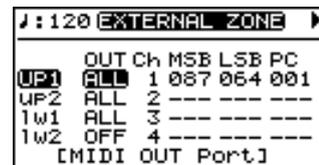
## Special Indications

88 KEYS / 88  A mark is displayed to the right of the tone name when you select an 88-key multisampled piano tone in the Tone screen.

◀▥  A mark is displayed to the left of the tone name when you select "TW-Organ 1–10" in the Tone screen.

Pressing CURSOR [ ◀ ] while this mark is displayed brings up the Tone Wheel screen (p. 53).

M:  With Clock Source (p. 81) set to MIDI, the tempo indication changes to "M:" for each screen.
The tempo can be changed with the external MIDI devices when this mark is indicated.

EQ  With EQ Mode (p. 80) set to SYSTEM, this mark appears upper right on the screen.
Equalizer settings do not change when Setups are switched while this mark is indicated.

PD  With Pedal Mode (p. 80) set to "SYSTEM," this mark appears on the upper right of the screen.
Pedal settings do not change when Setups are switched while this mark is indicated.

## About the Function Buttons

```
       FUNCTION
  EDIT   WRITE   NUM
                 LOCK
   ⊔      ⊔       ⊔
       — DEMO —
```
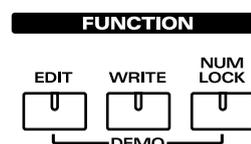
## [EDIT]

By pressing [EDIT] to make the indicator light, you can enter "Edit mode." In Edit mode you can make detailed settings for various functions.
You can exit Edit mode by pressing [EDIT], extinguishing its indicator.

## [WRITE]

Stores the current settings to "Setup" (p. 58).

## [NUM LOCK]

When [NUM LOCK] is pressed, the button's indicator lights up, enabling input of numerical values using the TONE SELECT buttons. The button indicators automatically light according to the values set.

### About the CURSOR Buttons
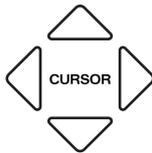
The CURSOR buttons are used for switching screens, and for moving to an item whose setting you want to change (by moving the cursor).

## Moving Between Display Pages

When arrow symbols (" ◀ " and " ▶ ") appear at the upper right of the display screen, it indicates that there are additional pages in the directions shown by the arrows.

You can switch screens with CURSOR [ ◀ ] and [ ▶ ].

## Navigating Among Items To Be Set (CURSOR)

When more than one parameter is present in a screen, the name and value of the parameter to be changed is shown with a box around it. This box is referred to as the "cursor." The cursor is moved with the CURSOR buttons.
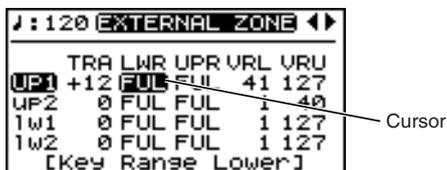
Additionally, when multiple parameters are presented horizontally in a row, as shown in the EXTERNAL screen, you can get the cursor to move more rapidly by holding down the CURSOR button that points in the direction you want the cursor to move while you also press the CURSOR button that points in the opposite direction.

### Changing the Settings Values
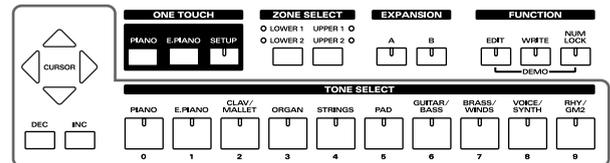
When changing settings values, you can use [DEC] and [INC], or the TONE SELECT buttons (numeric keys).

## [DEC], [INC]

Pressing [INC] increases the value, and [DEC] decreases it. Keep the button pressed for continuous adjustment. For faster value increases, keep [INC] pressed down and press [DEC]. For decreasing value faster, keep [DEC] pressed down and press [INC].
Simultaneously pressing [DEC] and [INC] sets that parameter to the standard default value or switches it off.

## TONE SELECT Buttons (Numeric Keys)

When [NUM LOCK] is on (lit), numerical values can be input directly using the TONE SELECT buttons, which then serve as [0]–[9] numeric keys. When you enter the number, the value will blink. This indicates that the value has not yet been finalized. To finalize the value press [ENTER].
With some parameters, [NUM LOCK] may come on automatically, allowing you to input numerical values directly with the TONE SELECT buttons.

**(MEMO)**

Only numerical values can be entered using the numeric keys. To switch the positive (+) or negative (-) signs for numerical values and make continuous changes in the numerical values, press [INC] or [DEC].

# Listening to the Demo (DEMO PLAY)

Here's how to listen to these songs.
The RD-700SX features the internal demo songs that exhibit the special capabilities of the instrument.

| No. | Song Name | Composer/Copyright | |
|-----|-----------|--------------------|---|
| 01. | Take a Break | Scott Tibbs | © 2004 Roland Corporation |
| 02. | Superior Grand | Scott Tibbs | © 2004 Roland Corporation |
| 03. | Everything Cool | Scott Tibbs | © 2004 Roland Corporation |
| 04. | Tone Preview | Scott Tibbs | © 2004 Roland Corporation |

Demo song 04 "Tone Preview" makes effective use of the internal tones. A total of ten pieces are offered, one for each TONE CATEGORY.
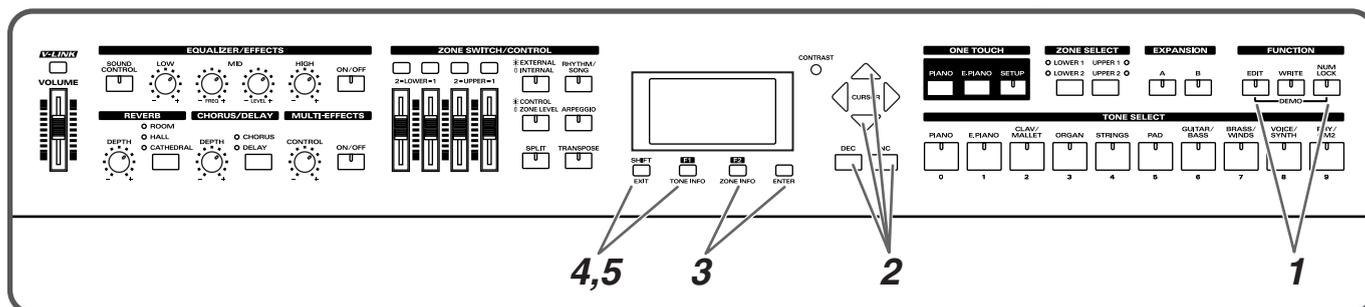


\* When demo songs are playing back, all settings are switched to their status at the time the RD-700SX's power was turned on. Store any arrangements of settings that you want to keep in Setup (p. 58).

## 1
**Hold down [NUM LOCK] and press [EDIT].**
The Demo screen appears.

```
      RD-700SX DEMO
   ─────────────────────
   1: Take a Break
   2: Superior Grand
   3: Everything Cool
   4: Tone Preview
   ─────────────────────
   ▐  EXIT  ▌   ▐  PLAY  ▌
```
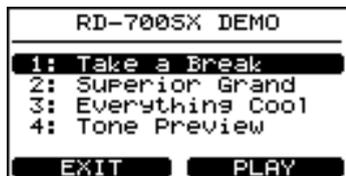
## 2
**Press CURSOR [ ▲ ] / [ ▼ ] or [INC] / [DEC] to select the song that you wish to hear.**

## 3
**Press CURSOR [F2(PLAY)] or [ENTER] to start playback of the demo song.**
Press any one of the TONE SELECT buttons, and playback begins from the demo song corresponding to the button pressed.
When all songs have been played, playback will return to the first song and resume. Pressing a TONE SELECT button during playback stops the song being played, and playback of the newly selected song begins.

## 4
**Press CURSOR [EXIT] or [F1(MENU)] to stop a song during playback.**

## 5
**Press [EXIT] or [F1(EXIT)] while the song is stopped to finish with the Demo screen.**
You are returned to the Tone screen.

---

**NOTE**

**NOTE**

No data for the music that is played will be output from the MIDI OUT connector.

**MEMO**

Regardless of whether the song is playing or stopped, pressing ONE TOUCH [PIANO] or [E.PIANO] ends the demo and returns the original screen to the display.

# Performing with the Keyboard

## Piano Performances (ONE TOUCH)

Now, try performing with the piano.

With the RD-700SX, you can call up the optimal settings for piano performances with the press of a single button.

You can also select your preferred tones and settings and store them to the instrument's buttons.



**1**
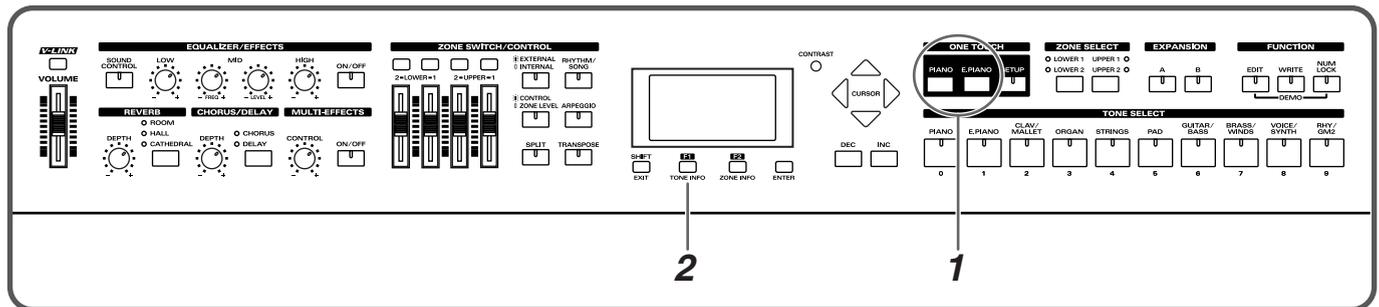
### Press ONE TOUCH [PIANO] or [E.PIANO].



Pressing ONE TOUCH [PIANO] sets the entire keyboard to play with the piano tone.

Pressing ONE TOUCH [E.PIANO] sets the entire keyboard to play with the electric piano tone.

**2**

### You can now press [F1] to switch the type.

Pressing [F1] toggles you between Types A and B.



With the RD-700SX, you can also make more detailed settings to make the sound even better match your favorite piano performances. You can store a total of four settings configurations, two each to [PIANO] and [E.PIANO].

Please refer to each as needed.

- Fine Adjustment of Piano Tones (Piano Edit) →p. 73
- Fine Adjustment of E.Piano Tones (E.Piano Edit) →p. 76
- Fine Adjustment of the Piano Touch Sense →p. 74

**NOTE**

Pressing ONE TOUCH [PIANO] or [E.PIANO] restores all of the settings except for the Piano Edit(p. 73) or Electric Piano Edit(p. 76) settings to their status at the time the power was turned on. If you want to preserve these settings, record them to a setup(p. 56).

**MEMO**

You can use CURSOR [ ▲ ]/ [ ▼ ] in the ONE TOUCH (PIANO) screen to adjust the amount the grand piano lid is opened.

# Performing with a Variety of Tones

The RD-700SX provides 488 types of Tones.

Each one of these individual sounds is called a "tone."

Tones are assigned to the TONE SELECT buttons according to the tone category selected.

Try selecting and performing with a number of different tones.
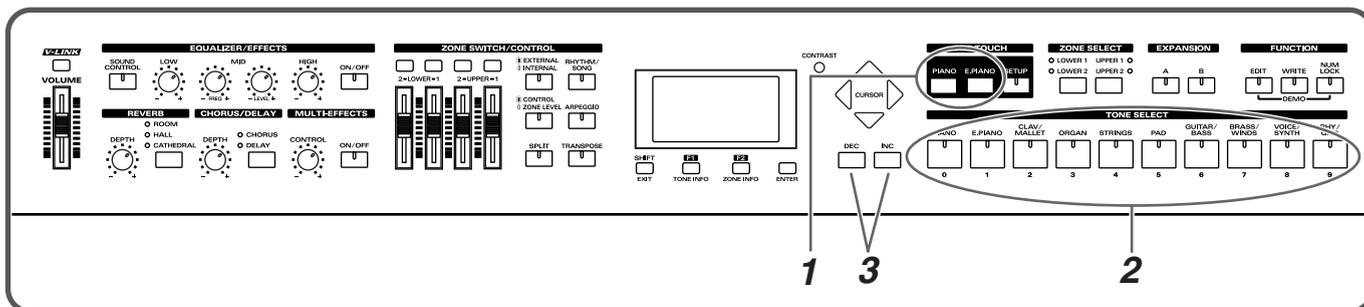
## 1

### Press ONE TOUCH [PIANO] or [E.PIANO].

This selects a single tone to be played over the entire keyboard.

## 2

### Press any of the TONE SELECT buttons to select the tone category.

The TONE SELECT button for the selected category lights.

## 3

### Press [INC]/[DEC] to select the tone.

Play the keyboard, and you will hear the selected tone.

The next time you choose this TONE SELECT button, the tone you're selected here is played.

**MEMO**

If multiple tones are playing, do not press the ONE TOUCH [PIANO] button, but instead select the zone containing the tone to be changed using the ZONE SELECT buttons. Refer to **"Changing the Tone for a Zone"** (p. 40).

**NOTE**

If [NUM LOCK] is turned on, the Tone Category cannot be selected with TONE SELECT button. For details, refer to p. 34.

**NOTE**

Tones selected with [RHY/GM2] are registered in the following order: "Rhythm Sets," "GM2 Rhythm Sets," and "GM2 Tones." Refer to the **"Tone List"** (p. 146).

## Specifying the Tone Number to Select a Tone ([NUM LOCK])

Each individual tone has a different tone number.

You can select tones with the TONE SELECT buttons by inputting numerals with these buttons to specify tone numbers.

Turn [NUM LOCK] on when inputting numerals with the TONE SELECT buttons.

☞ **"Tone List"** (p. 146)
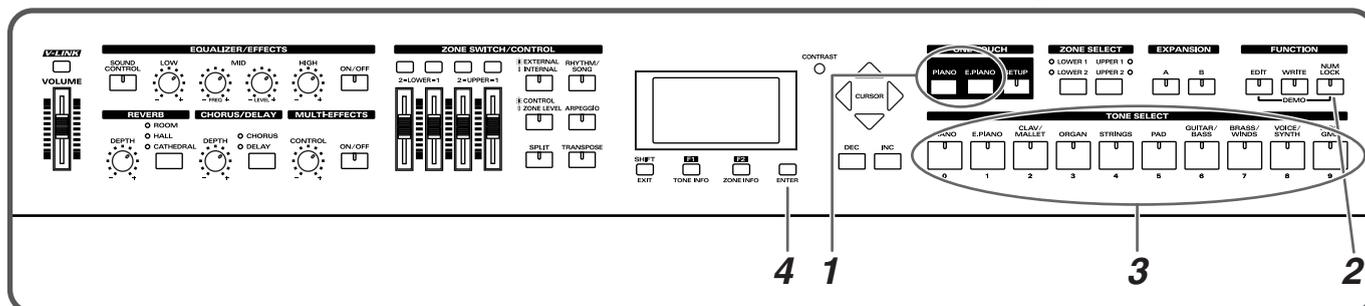


**1**
### Press ONE TOUCH [PIANO] or [E.PIANO].

This selects a single tone to be played over the entire keyboard.

**2**
### Press [NUM LOCK] to make the indicator light.

This enables input of numerals with the TONE SELECT buttons.
The numerical value that can be entered with each button is indicated beneath the buttons.

**3**
### Enter the tone number with the TONE SELECT buttons.

**4**
### Press [ENTER].

The tone is set.
Play the keyboard, and you will hear the selected tone.
The TONE SELECT buttons included in the selected Tone numbers lit.

**MEMO**

If multiple tones are playing, do not press the ONE TOUCH [PIANO] button, but instead select the zone containing the tone to be changed using the ZONE SELECT buttons. Refer to **"Changing the Tone for a Zone"** (p. 40).

### Playing a Rhythm Set

Among the tones that can be selected with the TONE SELECT buttons are Rhythm Sets, which are collections of a variety of percussion instrument sounds and special sound effects. Here's how to select a Rhythm Set and play percussion sounds.

1. **Press ONE TOUCH [PIANO] or [E.PIANO].**

2. **Press TONE SELECT [RHY/GM2].**
   If [NUM LOCK] is turned on at this time, the Rhythm Set Category cannot be selected. Turn [NUM LOCK] off.

3. **Press different keys to play different percussion instruments.**

4. **To select a different Rhythm Set, press [INC]/[DEC].**
   The combination of sounds assigned to the keyboard varies according to the Rhythm set. Refer to **"Rhythm Set List"** (p. 149).

**MEMO**

Tones selected with [RHY/GM2] are registered in the following order: "Rhythm Sets," "GM2 Rhythm Sets," and "GM2 Tones." Refer to the **"Rhythm Set List"** (p. 149).

## Selecting Wave Expansion Board Tones

Up to two optional wave expansion boards (SRX series) can be installed into the RD-700SX.

Use the following procedure when selecting tones stored on an wave expansion board.
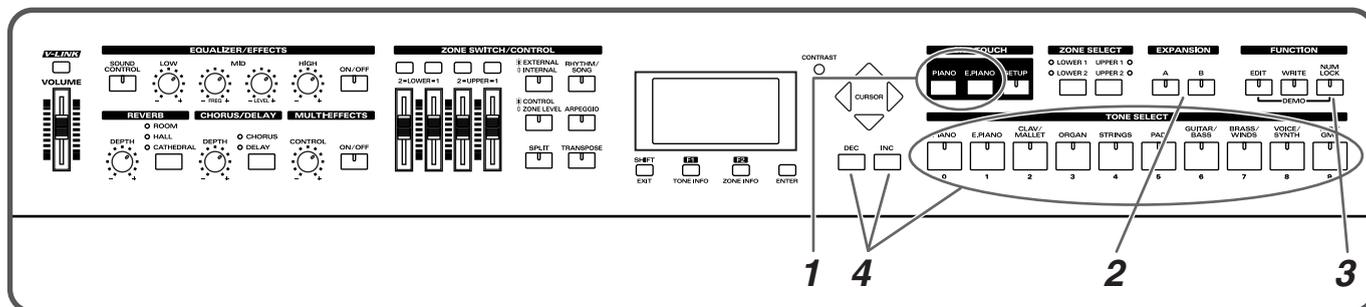


### 1

**Press ONE TOUCH [PIANO] or [E.PIANO].**

This selects a single tone to be played over the entire keyboard.

### 2

**Press EXPANSION [A] or [B] to make its indicator light.**

```
♩:120    TONE        ◀▶

UP1 A001
PremierGrand
```

If you hold down EXPANSION [A] or [B] for several seconds, the name of the installed wave expansion board appears in the display (p. 17).

### 3

**Press [NUM LOCK] to turn on the button indicator.**

### 4

**Press [INC]/[DEC], or press the TONE SELECT buttons to select the Tone.**

When using the TONE SELECT buttons to input Tone numbers, press [ENTER] afterwards to set the number.

### 5

**Play the keyboard, and you will hear the selected tone.**

**MEMO**

For instructions on installing the Expansion Board, refer to **"Installing the Wave Expansion Board"** (p. 15).

**MEMO**

For more on the wave expansion board tone lists, refer to "Patch List" (for RD-700) and "Rhythm Set List" (for RD-700) in the SRX Series Owner's Manuals. However, some of the tone names may be displayed differently on the RD-700SX. Refer to **"Wave Expansion Board Tone Name Correspondence Table"** (p. 36).

## Selecting Tones Without Pressing [NUM LOCK]

You can select tones stored on expansion boards with [NUM LOCK] off.

**1. Press EXPANSION [A] or [B] to make its indicator light.**

**2. Use the TONE SELECT buttons and [DEC]/[INC] to select the tone.**

Wave expansion board tones are assigned to the TONE SELECT buttons as shown below.



**3. Play the keyboard, and you will hear the selected tone.**

## Wave Expansion Board Rhythm Set Tone Numbers

When selecting a Wave Expansion Board Rhythm Set with the RD-700SX, the Wave Expansion Board Rhythm Sets are placed after Patches (called Tones on the RD-700SX).

Thus, when you want to specify a Wave Expansion Board Rhythm Set in terms of a Tone number, the Tone number can be arrived at by adding the desired Rhythm Set number in the Rhythm Set List to the last Patch number in the Patch List.

## Wave Expansion Board Tone Name Correspondence Table

The RD-700SX displays certain SRX Series tone names as shown below. There may be displayed differently from Owner's Manuals of SRX series.

| SRX-03 (STUDIO SRX) | | SRX-05 (Supreme Dance) | | SRX-07 (Ultimate Keys) | | SRX-08 (Platinum Trax) | |
|---|---|---|---|---|---|---|---|
| No. | Tone Name | No. | Tone Name | No. | Tone Name | No. | Tone Name |
| 005 | Taxi EP | 236 | Tri EP | 011 | TouchEP SRX | 378 | Echo EP SRX |
| 021 | US EP | 239 | EP Chd Menu | 013 | Stage EP 2 | | |
| 022 | Studio EP | 240 | EP Maj 9th | 015 | 80's EP | | |
| 023 | All EP | 241 | EP Maj 11th | 017 | Padded EP | | |
| 024 | Sens. EP | 242 | EP Min 11th | 019 | Sine EP | | |
| | | | | 022 | ClaviQ EP | | |
| | | | | 024 | 70'EP Bs | | |
| | | | | 033 | The 70'EP | | |

# Playing Multiple Tones with the Keyboard

The RD-700SX features four Internal zones (UPPER 1, UPPER 2, LOWER 1, and LOWER 2), and one tone can be assigned to each of these zones.

You can perform using combinations of tones by turning each zone on or off. You can have multiple tones layered together at the same time, and even have different tones played in the left and right parts of the keyboard.

## Performing with Layered Tones

You can perform with up to four layered tones applied to the entire keyboard.

| UPPER1 |
| --- |
| UPPER2 |
| LOWER1 |
| LOWER2 |

*1,2*
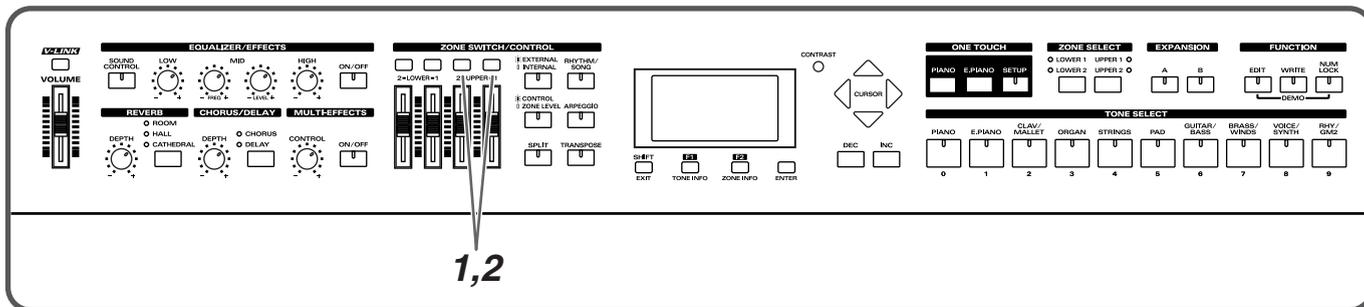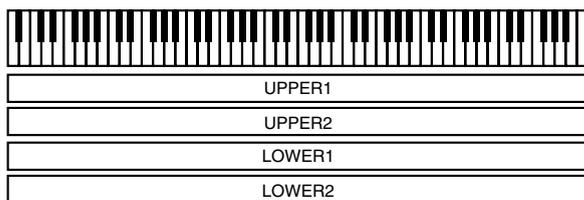
### 1

**Press PART SWITCH [UPPER1] and [UPPER2], getting the indicators to light.**

Try fingering the keyboard.

```
♩:120      TONE        ◀▶
UP1   001
Superior Grd  ▣
UP2   093
      SX Strings 1
```

The Tones for UPPER1 and UPPER2 are layered and played.

### 2

**Press [UPPER2] once more, and the indicator light goes out.**

The Tones for UPPER1 played.

Likewise, pressing [LOWER 1] and [LOWER 2] lets you then layer four tones.

### Pressing Two TONE SELECT buttons Simultaneously

* *Keep [NUM LOCK] off when carrying out this operation.*

Even without pressing the ZONE SWITCH buttons, you can layer two tones by pressing two TONE SELECT buttons simultaneously.

For example, if you want to layer a piano sound with strings, together press both [PIANO] and [STRINGS].

The [UPPER1] and [UPPER2] indicator automatically light up, and when you begin playing the keyboard, the piano and strings sounds are layered together.

When this is done, the tone for the button that is pressed down first is assigned to UPPER1, and the other tone is assigned to UPPER2. The UP1 and UP2 Part names are both highlighted in the screen, with both Parts being selected.

Once you have selected two TONE SELECT buttons, pressing either TONE SELECT button then selects that tone as the [UPPER 1] tone. The [UPPER 2] indicator goes out, and that tone stops playing.

* *The above procedure is enabled only when the [UPPER 1] or [UPPER 2] ZONE SELECT button is selected.*

## Playing Different Tones in Two Different Sections of the Keyboard ([SPLIT])

Such a division of the keyboard into right- and left-hand sections is called a "Split," and the key where the division takes place is called the "Split Point." While in Split Play, a sound played in the right side is called an "Upper Tone," and the sound played in the left side is called a "Lower Tone." The split-point key is included in the LOWER section.

The Split Point has been set at the factory to "B3."

**Split Mode**



**MEMO**
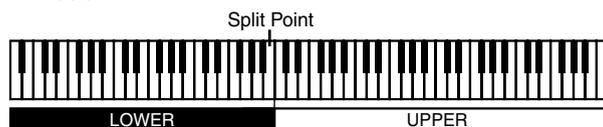
You can change the split point. Please refer to **"Changing the Keyboard's Split Point"** (p. 39).



1,2
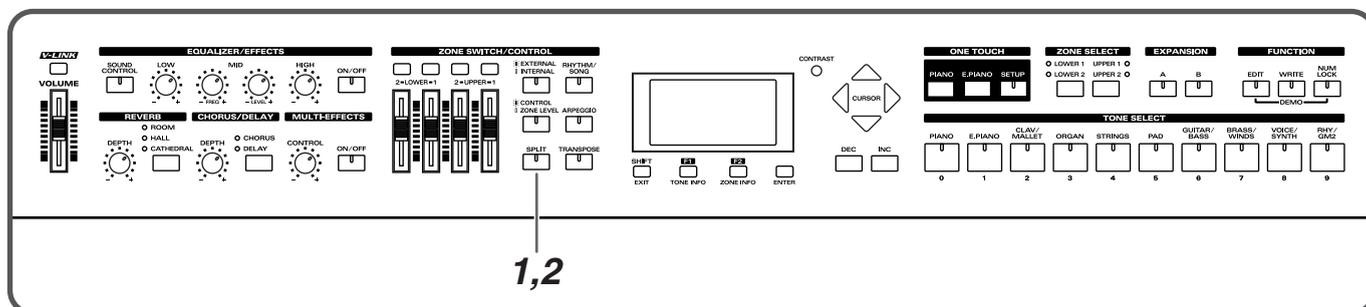
**1**

**Press [SPLIT], getting the indicator to light.**

ZONE SWITCH [LOWER 1] lights.

Try fingering the keyboard.

```
♩:120    TONE      ◀▶
UP1  001
Superior Grd 88
LW1  148
SX Ac.Bass
```

The UPPER tone plays in the right-hand section of the keyboard, and the LOWER tone plays in the left-hand section.

Split Point (B3)

LOWER  ←│→  UPPER
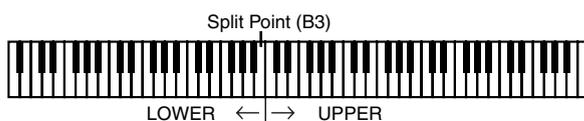
**2**

**To exit Split mode, press [SPLIT] once more, and the indicator light goes out.**

## Changing the Keyboard's Split Point

You can change the point at which the keyboard is divided (the Split Point) in Split mode.

**1**

**Hold down [SPLIT] for several seconds.**

A screen such as the following appears, and the current value of the setting is displayed.

```
♩:120    TONE      ◀▶
U    Split Point    8
S
LW        B 3
SX Ac.Bass
```
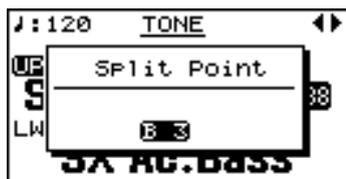
**2**

**Hold down [SPLIT] and press a key.**

When you release [SPLIT], the previous display will reappear.

The split-point key is included in the LOWER section.

When the split point is set, the Key Range (p. 69) in each zone is divided into left and right ranges with the split point as the boundary, and the following values are set.

• UPPER 1, UPPER 2: Split Point+1–C8
• LOWER 1, LOWER 2: A0–Split Point

**MEMO**

You can change the split point, adjusting it in semitone increments, by holding down [SPLIT] and pressing [INC] of [DEC].

**MEMO**

When the split point is changed, the Key Range (p. 69) value also changes.

**MEMO**

You can freely set whatever key ranges (registers) you like to each zone.

UPPER1
UPPER2
LOWER1
LOWER2
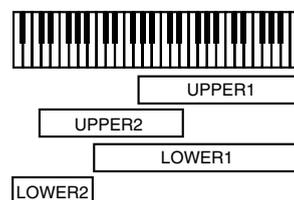
For details, refer to **"Setting the Key Range for Each Zone (Key Range)"** (p. 69).

## Changing the Tone for a Zone

When changing the tone assigned to a zone, use the ZONE SELECT button to specify the zone with the tone you want to change.
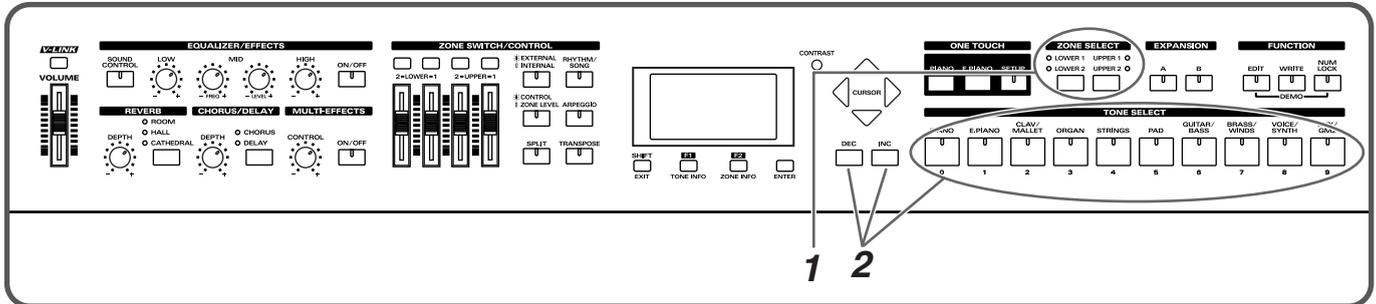


**1**

**Press the ZONE SELECT button for the part whose tone you want to change, causing the zone's indicator to light up.**

The indicator for the currently selected TONE SELECT button lights up in the same color as the indicator for the selected zone.

**2**

**Select the tone category with a TONE SELECT button, then press [INC]/[DEC] to select the tone.**

When [NUM LOCK] is on, you can specify tone numbers with the TONE SELECT buttons (p. 34).

**MEMO**

When you press the ZONE SELECT button corresponding to a zone for which the ZONE SWITCH is OFF (unlit), the three buttons for that zone, ZONE SWITCH, ZONE SELECT, and ENTER, start flashing. Pressing any of these flashing buttons then sets that zone's ZONE SWITCH to ON (lit).

# Adjust the Volume Level for Individual Zones (ZONE SWITCH/ZONE LEVEL Slider)



ZONE LEVEL Slider
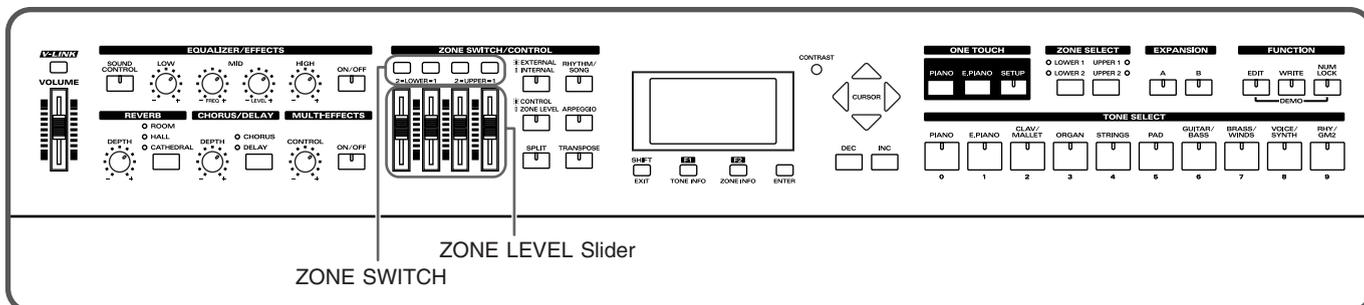
ZONE SWITCH

With the RD-700SX, each of the parts that is performed using the internal sound generator is referred to as an INTERNAL Zone.

You can use the ZONE SWITCH buttons and ZONE LEVEL sliders (UPPER 1, UPPER 2, LOWER 1, LOWER 2) to turn sounds on and off and set their volume level.

## ZONE SWITCH

This determines whether or not the sounds in the particular zone are played.

When a zone's ZONE SWITCH indicator is lit (on), the zone sounds when the keyboard is played. The screen Zone names are indicated in uppercase letters.

When a zone's ZONE SWITCH indicator is not lighted (off), the zone does not sound even when the keyboard is played. The screen Zone names are not indicated (Only UPPER1 appears in lowercase.).

ZONE SWITCH will turn on or off each time you press it.

## ZONE LEVEL Slider

Adjusts the volume of an individual zone.

When a zone's ZONE SWITCH indicator is not lighted, no sound is produced for the zone even when the slider is moved.

Zones to which tones from external sound modules are assigned are called EXTERNAL Zones. With the RD-700SX, you can control both the External and INTERNAL Zones in the same manner. For more on the control of EXTERNAL Zone, refer to **"Adjusting the Volume of Each Zone (EXTERNAL Zone)"** (p. 64).

**MEMO**

Use the VOLUME slider when adjusting the overall volume level (p. 24).

**NOTE**

You cannot adjust the volume level with the ZONE LEVEL sliders when [CONTROL/ ZONE LEVEL] is lit.

# Transposing the Key of the Keyboard ([TRANSPOSE])

You can transpose performances without changing the keys you are playing, as well as change the pitch by an octave. This feature is called "Transpose."

This is a convenient feature to use when you want to match the pitch of the keyboard performance to a vocalist's pitch, or perform using the printed music for trumpets or other transposed instruments.

The reference Transpose setting is C4, and the setting can be adjusted in semitone units in a range of -48–0–+48.

**NOTE**
Note messages from MIDI IN connector will not be transposed.



*1,2,3*

## 1
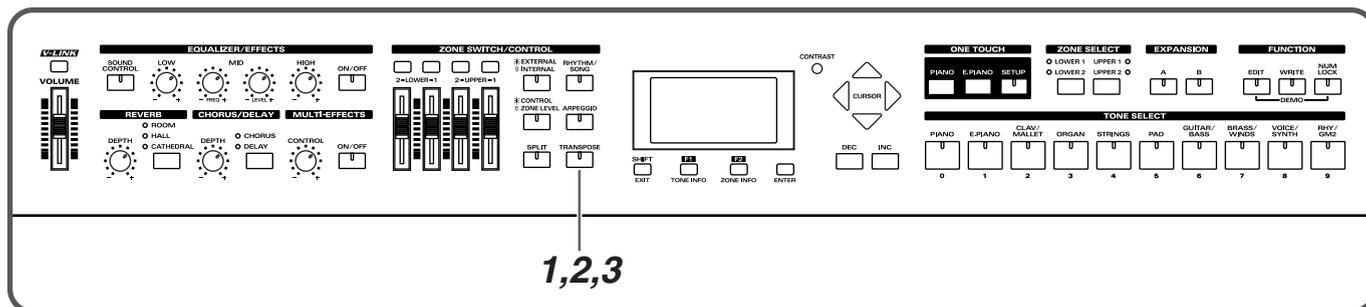
**Hold down [TRANSPOSE] for several seconds.**

A screen such as the following appears, and the current value of the setting is displayed.



## 2
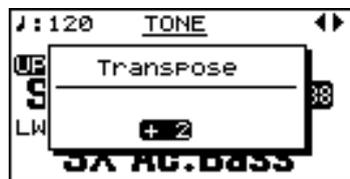
**Hold down [TRANSPOSE] and press a key.**

For example, to have "E" sound when you play "C" on the keyboard, hold down [TRANSPOSE] and press the E4 key. The degree of transposition then becomes "+4."

When you release [TRANSPOSE], the previous display will reappear.

When the amount of transposition is set, the Transpose function switches on, and [TRANSPOSE] lights up

When the transpose value is set to "0," the button's indicator will remain dark even if you press the [TRANSPOSE].

**MEMO**
You can also transpose by holding down the [TRANSPOSE] and pressing the [INC] or [DEC].

**MEMO**
Even when the Transpose function is turned on, the Split Point remains unchanged (p. 39).

## 3

**To turn off Transpose, press [TRANSPOSE] so that its indicator goes off.**

The next time [TRANSPOSE] is pressed, the sound is transposed by an amount corresponding to the value set here.

**MEMO**
You can set the degree of transposition for each of the Zone individually. For details, refer to **"Setting the Transposition for Each Individual Zone (Transpose)"** (p. 69).

# Adding Reverberation to the Sound ([REVERB])

The RD-700SX can apply a reverb effect to the notes you play on the keyboard. Applying reverb adds pleasing reverberation to what you play, so it sounds almost as if you were playing in a concert hall.

**REVERB**

DEPTH
○ ROOM
○ HALL
○ CATHEDRAL
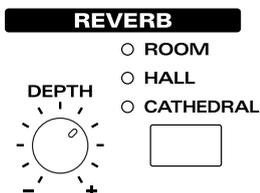
**1**

**Press the [REVERB].**

The reverb type switches each time you press the [REVERB].

| TYPE | explanation |
|------|-------------|
| OFF (unlit) | No reverb is used. |
| ROOM | Simulates the reverberation of a room. |
| HALL | Simulates the reverb of a large concert hall. |
| CATHEDRAL | Simulates the reverberation of a cathedral. |

**2**

**Adjust the REVERB [DEPTH] knob to select the amount of reverb effect to be applied.**

Rotating the knob clockwise applies a deeper reverb, and rotating it counterclockwise applies less reverb.

☞
**"Making Reverb Settings"** (p. 87).

MEMO
You can select the reverb types other than those shown at the left with ""**Reverb Type"** (p. 87)" in "3. Effects" in the Edit screen. In this case, the [REVERB] indicator corresponding to the selected type flashes.

NOTE
When the Tone Info's Reverb Amount setting is set to "0," then no effect is applied, even when the REVERB knob is turned (p. 71).

# Adding Breadth to the Sound ([CHORUS/DELAY])

You can apply a chorus and delay effect to the notes you play on the keyboard. By adding the chorus and delay effect, you can give the sound greater dimension, with more fatness and breadth.

**CHORUS/DELAY**

DEPTH
○ CHORUS
○ DELAY
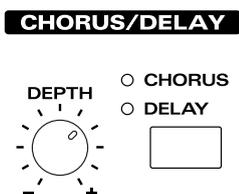
**1**

**Press the [CHORUS/DELAY].**

The chorus type switches each time you press the [CHORUS/DELAY].

| TYPE | explanation |
|------|-------------|
| OFF (unlit) | Chorus and Delay is not used. |
| CHORUS | You can give the sound greater dimension, with more fatness and breath. |
| DELAY | This effect delays the sound to produce an echo-like effect. |

☞
**"Setting Chorus and Delay"** (p. 88).

MEMO
You can select the chorus types other than those shown at the left with ""**Chorus Type"** (p. 88)" in "3. Effects" in the Edit screen. In this case, the [CHORUS/DELAY] indicator corresponding to the selected type flashes.

**2**

**Adjust the CHORUS/DELAY [DEPTH] knob to select the amount of chorus effect to be applied.**

Rotating the knob clockwise applies a deeper chorus, and rotating it counterclockwise applies less chorus.

**NOTE**

When the Tone Info's Chorus Amount setting is set to "0," then no effect is applied, even when the CHORUS knob is turned (p. 71).

# Changing the Sound's Pitch in Real Time (Bender/Modulation Lever)

While playing the keyboard, move the lever to the left to lower the pitch, or to the right to raise the pitch. This is known as Pitch Bend.

You can also apply vibrato by manipulating the lever away from you. This is known as Modulation.

If you move the lever away from you and at the same time move it to the right or left, you can apply both effects simultaneously.

Pitch Bend        Modulation
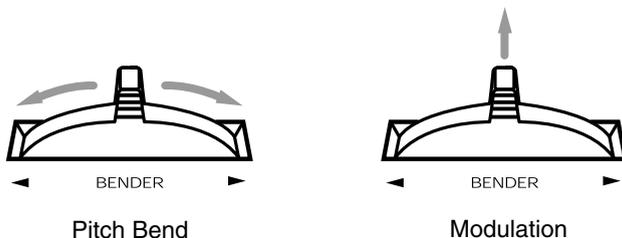
**NOTE**

The effect obtained when you move the lever may differ according to the tone being used. Additionally, the effect applied by moving the lever is predetermined for each tone, and cannot be changed.

**MEMO**

When the Tone Wheel screen is displayed, the Pitch Bend Lever is set so that tilting the lever from left to right switches the Rotary effect from fast to slow. For details, refer to **"Simulating the Creation of Organ Tones (Tone Wheel Mode)"** (p. 53).

# Adding Liveliness to the Sound ([SOUND CONTROL])

Switching on the Sound Control function suppresses differences in volume for a more consistent sound.

This is set to OFF when the power is turned on.

**EQUALIZER/EFFECTS**

SOUND CONTROL    LOW    MID    HIGH    ON/OFF

−   +    − FREQ +    − LEVEL +    −   +

**1**

**Press the [SOUND CONTROL] button, getting its indicator to light.**

**2**

**To cancel this function, press the [SOUND CONTROL] once more, extinguishing the indicator.**

**NOTE**

Sounds may become distorted with certain tones.

☞

**"Making the Sound Control Settings (Sound Control)"** (p. 88)

# Adjusting the Level of the Sound's Low, Mid, and High-Frequency Ranges ([EQUALIZER])

The RD-700SX is equipped with a three-band equalizer.
You can adjust the levels of the low-frequency, midrange, and high-frequency ranges using the EQUALIZER [LOW], [MID], and [HIGH] knobs, respectively.
You can also adjust the midrange frequency with [MID FREQ].

**EQUALIZER/EFFECTS**

SOUND CONTROL | LOW | MID | HIGH | ON/OFF

FREQ | LEVEL

### 1

**Press EQUALIZER [ON/OFF] to make its indicator light.**

A screen like the one shown below appears, and the equalizer is turned on.

```
Mid Gain:   + 0.0dB



  100    1K    10K
  HELP        NUMERIC
```
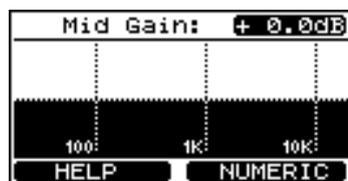
### 2

**Turn the knobs to adjust the levels in each range.**

Rotating a knob ([LOW], [MID LEVEL], [HIGH]) in the negative direction cuts the level of that frequency range; rotate it in the positive direction boost the level of that range.

In addition, rotating [MID FREQ] in the negative direction lowers the frequency, while rotating it in the positive direction raises the frequency.

You can press [F2] to get a numerical reading for the value of the setting. Pressing [F2] toggles you between "NUMERIC" and "GRAPHIC" as the format for what you see indicated in the screen.

GRAPHIC

```
Mid Gain:   + 8.4dB



  100    1K    10K
  HELP        NUMERIC
```
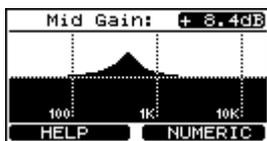
NUMERIC

```
Input Gain:  + 0dB
     LOW   MID   HIGH
dB  +10.2  + 0.0  + 0.0
Hz   100    400  10000
Q    1.0    2.0   0.5
               GRAPHIC
```

The way settings are made differs depending on the format used, as follows:

### When the Graphic format is used

- Slightly adjust the knob for the range in which you want to change the value to move the cursor.

- Press CURSOR [ ◀ ]/[ ▶ ] to adjust the frequency.
- Press CURSOR [ ▲ ]/[ ▼ ] to adjust the Q.

### When the Numeric format is used

- Press CURSOR [ ▲ ]/[ ▼ ]/[ ◀ ]/[ ▶ ] to move the cursor.
- Press [INC]/[DEC] to change the value.

### 3

**To turn the equalizer off, press EQUALIZER [ON/OFF], extinguishing its indicator.**

**NOTE**

Equalization is applied to the overall sound output from the OUTPUT jacks.

**MEMO**

You can set the RD-700SX so that the equalizer settings are not changed when you change setups. Refer to **"Preventing Equalizer Settings from Being Switched (EQ Mode)"** (p. 80).

**NOTE**

Sounds may be distorted with certain knob settings. If this occurs, adjust the Input Gain on the upper of the "NUMERIC' screen.

# Using the Convenient Functions in Performances

## Playing Arpeggios ([ARPEGGIO])

The RD-700SX's Arpeggio function lets you produce arpeggios automatically; simply hold down some keys, and a corresponding arpeggio will be played automatically.

*1,3*
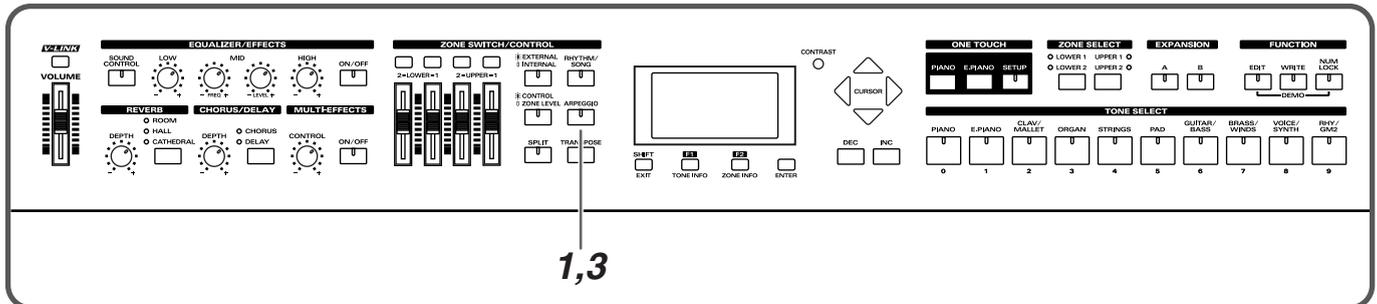
**1** Press [ARPEGGIO], getting the indicator to light.

**2** Press a key below Middle C (C4).

The arpeggio starts, with the notes being played in the sequence the keys were pressed.

C4
Key ranges in which arpeggios can be played
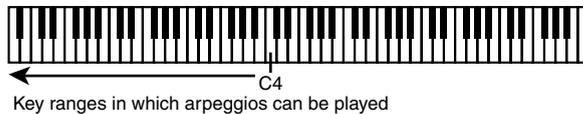
**3** If you press [ARPEGGIO] once more, the indicator light goes out, and the keyboard returns to the normal performance mode.

**MEMO**

At the factory settings, arpeggios continue playing even after the keys are released, but you can also have arpeggios stop playing when you release the keys (p. 96).

**MEMO**

When the Arpeggio's Arpeggio Hold is set to ON in Edit mode (p. 96), the [ARPEGGIO] indicator flashes.

**MEMO**

For more detailed information, including applicable key ranges and instructions for playing arpeggios, refer to **"Making Arpeggio Settings"** (p. 95).

**MEMO**

When you are performing arpeggios while a rhythm is playing, the arpeggio stops playing at the same time the rhythm stops.

## Changing the Arpeggio Style

You can select the way an arpeggio is played (the style) to match a variety of different musical genres.

**1**

Press [ARPEGGIO], getting the indicator to light.

**2**

Press CURSOR [ ▶ ] to go to the Rhythm/Song/Arpeggio screen.

```
♩:120   RHY/ARP        ◀
RHY  001
     R&B Pop 1
ARP  001
       Phrase  1
     SONG         PLAY
```

**3**

Press CURSOR [ ▼ ] to move the cursor to "ARP."

**4**

Press [INC]/[DEC] to select the style.

The arpeggio's style changes.

**5**

Try playing the keyboard.

**6**

If you press [ARPEGGIO] once more, the indicator light goes out, and the keyboard returns to the normal performance mode.

## Changing Arpeggio Tempos

**1**

In the Rhythm/Song/Arpeggio screen, press CURSOR [ ▲ ] to move the cursor to " ♩: " in the screen.

**2**

Press [INC]/[DEC] to change the tempo.

When you play the keyboard, arpeggios are played at the selected tempo.

You can change a variety of arpeggio settings beyond just the arpeggio style and tempo by holding down [SHIFT] and pressing [ARPEGGIO].
For details, refer to **"Making Arpeggio Settings"** (p. 95).

☞
**"Setting the Way Arpeggios are Played (Arpeggio Style)"** (p. 95)

☞
**"Arpeggio Style List"** (p. 152).

**MEMO**
When you're at the Tone screen, you can press CURSOR

[ ▶ ] to go to the Rhythm/ Song/Arpeggio screen. From the Rhythm/Song/Arpeggio screen, you can get back to the Tone screen by pressing

CURSOR [ ◀ ].

**MEMO**
The way arpeggio is played and the tempo display may differ with some arpeggio Styles.

# Playing Rhythm ([RHYTHM/SONG])

The RD-700SX features internal drum patterns complementing Jazz, Rock, and other various musical genres. These drum patterns are referred to as "Rhythms."

You can perform using Rhythms combined with various functions, for example performing arpeggios while a Rhythm is playing.

When "SONG/ARP" screen is selected for the Rhythm/Song/Arpeggio screen, pressing [RHYTHM/SONG] then starts playback of the song.

Before playing the rhythm, first check the screen using the following procedure.

**1.** **Press CURSOR [ ▶ ] in the Tone screen to select the Rhythm/Song/ Arpeggio screen.**

### Rhythm/Song/Arpeggio screen

"Song/Arpeggio" screen
(playback songs)

```
♩:120   SONG/ARP      ◀
SONG 000
Enjoy Yourself
ARP  001
       Phrase  1
   RHYTHM  |  PLAY
```

"Rhythm/Arpeggio" screen
(playback rhythms)

```
♩:120   RHY/ARP       ◀
RHY  001
       R&B Pop 1
ARP  001
       Phrase  1
   SONG    |  PLAY
```

**2.** **If you're at the "SONG/ARP" screen, press [F1] to access the "RHY/ARP" screen.**

You'll then be able to play back rhythms.

*1,2*

### 1
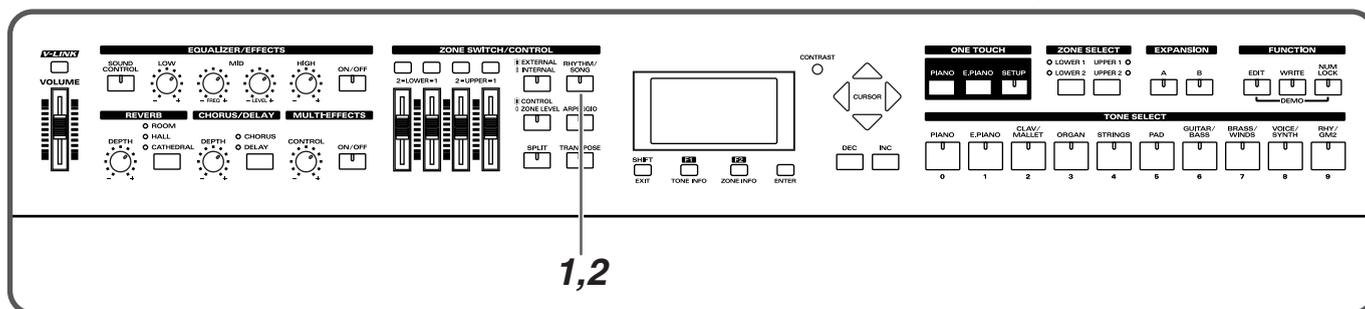
**Press [RHYTHM/SONG] to make the button indicator light.**

The Rhythm begins playing.

### 2

**Press [RHYTHM/SONG] once more; the indicator goes out, and the Rhythm stops playing.**

You can also start and stop playback of the rhythm by pressing [F2].

**MEMO**

When the Arpeggio's Arpeggio Hold is set to ON in Edit mode (p. 96), if an arpeggio is played while a rhythm plays, the arpeggio will stop at the moment that the rhythm stops.

## Changing the Rhythm Pattern

You can select the way a Rhythm is played (the pattern) to match a variety of
different musical genres.

**1**

**Press CURSOR [ ▶ ] to go to the Rhythm/Song/Arpeggio screen.**

```
♩:120    RHY/ARP       ◀
RHY  001
     R&B Pop 1
ARP  001
     Phrase  1
     SONG        PLAY
```
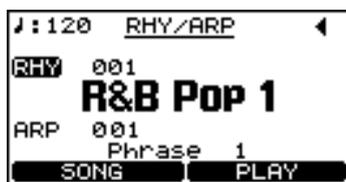
If you're in the "SONG/ARP" screen, press [F1] to access the "RHY/ARP" screen.

**2**

**Press [RHYTHM/SONG] to make the button indicator light.**

The Rhythm begins playing.

**3**

**Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to "RHY."**

**4**

**Press [INC]/[DEC] to select the pattern.**

The Rhythm's pattern changes.

**5**

**If you press [RHYTHM/SONG] once more, the indicator light goes out,
and the Rhythm stops playing.**

## Changing Rhythm Tempos

**1**

**In the Rhythm/Song/Arpeggio screen, press CURSOR [ ▲ ] to move
the cursor to " ♩: " in the screen.**

**2**

**Press [INC]/[DEC] to change the tempo.**

The Rhythm are played at the selected tempo.

You can change a variety of arpeggio settings beyond just the arpeggio style and
tempo by holding down [SHIFT] and pressing [RHYTHM/SONG].

For details, refer to **"Making the Rhythm and Arpeggio Settings (Rhythm/
Arpeggio)"** (p. 93).

**MEMO**

For more information about
the kind of Rhythm Patterns,
please refer to **"Rhythm
Pattern List"** (p. 153).

**MEMO**

When the Tone screen is
displayed, the Rhythm/Song/
Arpeggio screen appears when
CURSOR [ ▶ ] is pressed.

Pressing CURSOR [ ◀ ] when
the Rhythm/Song/Arpeggio
screen is showing then
displays the Tone screen.

**MEMO**

The way Rhythm is played and
the tempo display may differ
with some Rhythm Patterns.

# Playing the Songs ([RHYTHM/SONG])

The RD-700SX can play back SMF music files.

When "RHY/ARP" screen is selected for the Rhythm/Song/Arpeggio screen, pressing [RHYTHM/SONG] then starts playback of the rhythm.

Before playing the rhythm, first check the screen using the following procedure.

1. **Press CURSOR [ ▶ ] in the Tone screen to select the Rhythm/Song/ Arpeggio screen.**

### Rhythm/Song/Arpeggio screen

"Song/Arpeggio" screen (playback songs)

```
♩:120  SONG/ARP      ◀
SONG 000
Enjoy Yourself
ARP  001
      Phrase  1
  RHYTHM  |  PLAY
```

"Rhythm/Arpeggio" screen (playback rhythms)

```
♩:120  RHY/ARP       ◀
RHY  001
     R&B Pop 1
ARP  001
      Phrase  1
  SONG  |  PLAY
```

2. **If you're at the "RHY/ARP" screen, press [F1] to access the "SONG/ARP" screen.**

You'll then be able to play back songs.

**1,2**

**1 ▶**

**Press [RHYTHM/SONG] to make the button indicator light.**

The song data begins playing.

**2 ▶**

**Press [RHYTHM/SONG] once more; the indicator goes out, and the song stops playing.**

You can also start and stop playback of the song by pressing [F2].

**MEMO**

You can use the USB connector to exchange song data between the RD-700SX and your computer. Refer to **"Exchanging Files with Computers (Storage Mode)"** (p. 105)

## Selecting the Song

**1**

**Press CURSOR [ ▶ ] to go to the Rhythm/Song/Arpeggio screen.**

```
♩:120   SONG/ARP      ◀
SONG 000
Enjoy Yourself
ARP   001
        Phrase   1
   RHYTHM   |   PLAY
```

If you're in the "RHY/ARP" screen, press [F1] to access the "SONG/ARP" screen.

**2**

**Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to "SONG."**

**3**

**Press [INC]/[DEC] to select the song.**

**4**

**Press [RHYTHM/SONG] to make the button indicator light.**

The selected song begins playing.

Song number "000" is programmed with a Preset song.

Enjoy performing on the keyboard along with this song as it is played back.

| No. | Song Name | Composer/Copyright | |
| --- | --- | --- | --- |
| 000. | Enjoy Yourself | Scott Tibbs | ©2004 Roland Corporation |

## Changing Song Tempos

**1**

**In the Rhythm/Song/Arpeggio screen, press CURSOR [ ▲ ] to move the cursor to " ♩: " in the screen.**

**2**

**Press [INC]/[DEC] to change the tempo.**

The song are played at the selected tempo.

**MEMO**

When the Tone screen is displayed, the Rhythm/Song/ Arpeggio screen appears when

CURSOR [ ▶ ] is pressed.

Pressing CURSOR [ ◀ ] when the Rhythm/Song/Arpeggio screen is showing then displays the Tone screen.

**MEMO**

You can change the Output jack of the song data when setting the MIDI OUT Port (p. 61).

# Applying Effects to the Sound (Multi-Effects)

In addition to chorus (p. 43) and reverb (p. 43), the RD-700SX also allows you to apply "multi-effects" to sounds. Multi-effects provides a collection of 125 different effects, such as distortion and rotary, from which you can choose.

You can use two multi-effects simultaneously; these are referred to as MFX1 and MFX2.

The factory settings have a suitable effect assigned to each of the tones.

☞
**"Effect/Parameter List"**
(p. 112).



*1,2,3*
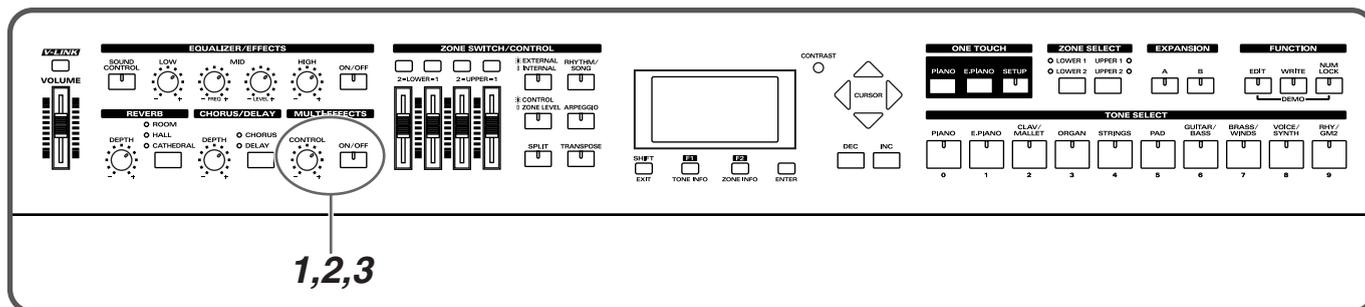
**1**
> Press MULTI-EFFECTS [ON/OFF], getting its indicator to light.

**2**
> Adjust the amount of multi-effect applied with the MULTI-EFFECTS [CONTROL] knob.

**3**
> To cancel the multi-effect, press MULTI-EFFECTS [ON/OFF], the indicator light goes out.

**MEMO**
The allowable values adjusted with the MULTI-EFFECTS [CONTROL] knob vary with the selected effect. For details, refer to **"MFX Control"** (p. 87).

**NOTE**
Effects are not applied to Tones for which the Tone Info MFX settings are set to "00 THRU" (p. 71).

## Specifying the Zone on Which to Use the Multi-effects

With the RD-700SX, you can use two different multi-effects simultaneously. Thus, the RD-700SX features settings parameters called "MFX Source" for selecting the multi-effects settings to be used and "MFX Dest" for selecting the zone to which the multi-effects are applied. Therefore, when multiple zones are being played, please note that according to the MFX Source and MFX Dest settings, there may be certain zones to which no multi-effects are applied.

For more detailed information, refer to MFX Source (p. 86), and MFX Dest (p. 87).

You can change a variety of Multi-effects settings beyond just the Multi-effects type by holding down [SHIFT] and pressing MULTI-EFFECTS [ON/OFF]. For details, refer to **"Making Multi-Effects Settings"** (p. 86).

## Simulating the Creation of Organ Tones (Tone Wheel Mode)

When any of the "TW-Organ 1–10" Tones is selected for any of the INTERNAL Zone (UPPER1, UPPER2, LOWER1, LOWER2), you can perform in "Tone Wheel mode," in which the creation of organ sounds is simulated.

An organ features nine "harmonic bars" that can be drawn in and out, and by using the bars in different combinations of positions, a variety of different tones can be created. Different "Feet" are assigned to each bar, with the pitches of the sounds being determined by these "Feet."

You can simulate the creation of tones using the harmonic bars by assigning Feet to the ZONE LEVEL sliders.

While there are only four ZONE LEVEL sliders, you can switch the Feet setting by turning the ZONE SWITCH buttons on and off, thus allowing you to assign eight Feet settings to the sliders.

### What Are "Feet?"

Feet basically refers to the lengths of pipe used in pipe organs. The length of pipe used to produce the reference pitch (the fundamental) for the keyboard is eight feet. Reducing the pipe to half its length produces a pitch one octave higher; conversely, doubling the pipe length creates a pitch one octave lower. Therefore, a pipe producing a pitch one octave below that of the reference of 8' (eight feet) would be 16'; for one octave above the reference, the pipe would be 4', and to take the pitch up yet another octave it would be shortened to 2'.
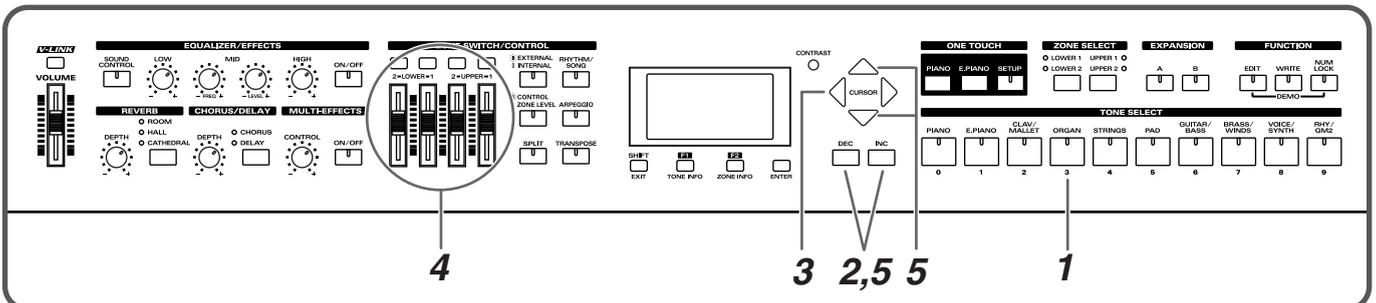


**1**

**Bring up the Tone screen (p. 29), then press the [ORGAN].**

If the Tone screen is not currently displayed, press ONE TOUCH [PIANO], then press the [ORGAN].

**2**

**Press the [INC] / [DEC] to select one of the "TW-Organ 1–10" Tone.**

**3**

**Press the CURSOR [ ◀ ] button.**

The following Tone Wheel screen appears.

This Tone Wheel screen appears only when a Tone Wheel Tone is selected for one of the Zone in the Tone screen.
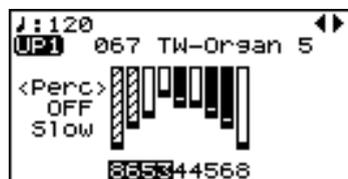
**4**

**When the ZONE LEVEL sliders are moved, the harmonic bars move in the display, and the tone changes.**

By pressing the ZONE SWITCH buttons on and off, you can adjust the sounds for other Feet.

If the cursor is moved to the value at the bottom of the screen, you can adjust the sounds for Feet with [DEC] and [INC].

**5**

**Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to <Perc> and press [DEC]/[INC] to change the value.**

Perc (Percussion) adds an attack-type sound to the beginning of the note to give the sound more crispness. The attack sound changes according to the value.

| Settings | Description |
|----------|-------------|
| OFF | No percussion is added. |
| 2nd | Percussion sounds at a pitch one octave above that of the key pressed. |
| 3rd | Percussion sounds at a pitch an octave and a fifth above that of the key pressed. |
| Slow | The percussion's attenuation time is lengthened. This softens the sense of attack. |
| Fast | The percussive sound will decay more quickly. This gives more of a sense of attack for a sharp sound. |

## Changing the Undulation of the Organ Tone (Rotary Effect)

While the Tone Wheel screen is displayed, you can change the undulation rate of the Rotary effect with the Pitch Bend lever.

The Rotary effect is an effect that recreates the sound of the rotating speakers used to augment the sound of an organ.

The Rotary effect is set to alternately rotate more rapidly or slowly when the Pitch Bend lever is moved to the left and right; the direction is not fixed.

## Changing the ZONE LEVEL Slider Feet Assignments (Harmonic Bar)

You can change the Feet assigned to each of the ZONE LEVEL sliders used in Tone Wheel mode.

**1**

**Press [EDIT], getting the indicator to light.**

The Edit Menu screen appears.

```
=== EDIT MENU ===
0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
        ▼
```

**2**

**Press CURSOR [ ▲ ]/[ ▼ ] to select "2.Control."**

**3**

**Press [ENTER] to display the Edit screen.**

**NOTE**

The Percussion is applied only to the UPPER Tone.

**NOTE**

When percussion is on, the 1' pitch will not be produced (p. 53).

**MEMO**

The settings changed here are stored to each Tone. Even when you exit from Tone Wheel mode, you can press [ORGAN] to select the Tone with the changed settings.

**MEMO**

This Pitch Bend Lever setting is effective only in the Tone Wheel screen.

*4* ▶

**Press CURSOR [ ◀ ]/ [ ▶ ] to select "Harmonic Bar."**

Feet Assignments in the Tone Wheel Screen

16'  5 1/3'  8'    4'    2 2/3'  2'  1 3/5' 1 1/3'  1'

```
EDIT [Harmonic Bar]◀
        : LED ON:LED OFF
.................................
UP1:       4'        1'
UP2:       8'      1-1/3'
LW1:    5-1/3'     1-3/5'
LW2:      16'        2'
```

*5* ▶
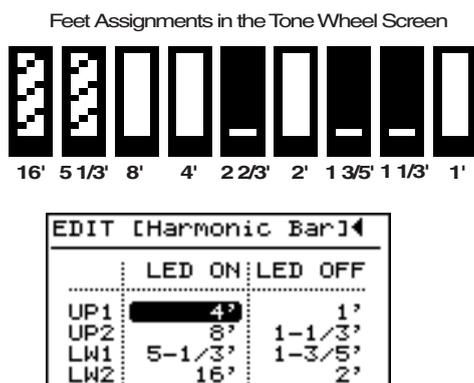
**Press CURSOR [ ▲ ]/[ ▼ ]/[ ◀ ]/[ ▶ ] to move the cursor to the parameter for changing the Feet.**

"LED ON" and "LED OFF" in the screen indicate whether ZONE SWITCH is switched on or off.

| Parameter | Value |
|-----------|-------|
| UP1 | 16', 5-1/3', 8', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1' |
| UP2 | |
| LW1 | |
| LW2 | |

*6* ▶

**Press [INC]/[DEC] to select the Feet.**

*7* ▶

**When you have finished making the settings, press [EDIT], extinguishing its indicator.**

You are returned to the Tone screen.

# Disabling the Button (Panel Lock)

Once Panel Lock is engaged, all buttons (except for the VOLUME slider, CONTRAST knob, Pitch Bend/Modulation lever, Pedal, ONE TOUCH [PIANO], ONE TOUCH [E.PIANO], and [EXIT]) will not function. This prevents settings from being changed inadvertently on stage or in other such situations.

*1* ▶

**While holding down [EDIT], press [ENTER].**

Following display will appear.

```
♩:120    TONE        ◀▶
┌──────────────────┐
UP│Panel is Locked │
S │ Press [EXIT]   │
└──────────────────┘
```
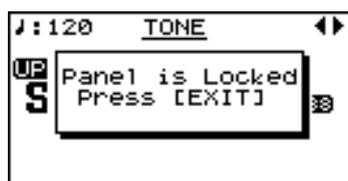
*2* ▶

**Press ONE TOUCH [PIANO] or [EXIT] to cancel Panel Lock.**

# Selecting Stored Settings ([SETUP])

The RD-700SX's INTERNAL ZONE (p. 28) and EXTERNAL ZONE (p. 28) tone settings, effect settings, and other such settings are collectively referred to as a "Setup."

Once you've stored your preferred settings, and settings for the songs to be performed as a Setup, you can then switch whole groups of settings during a performance just by switching Setups.

You can store up to 100 different Setups.

The RD-700SX is shipped from the factory with recommended Setups already prepared.

You can also register the Setups you like and use frequently to the TONE SELECT buttons. These registered Setups are called the "Favorite Setups."

This function allows you to select Setups more quickly.

Now try actually calling up a Setup.

**NOTE**

The current settings are erased when a Setup is called up. Be sure to save any Setup you would like to keep first before calling up another Setup (p. 58).

**1**
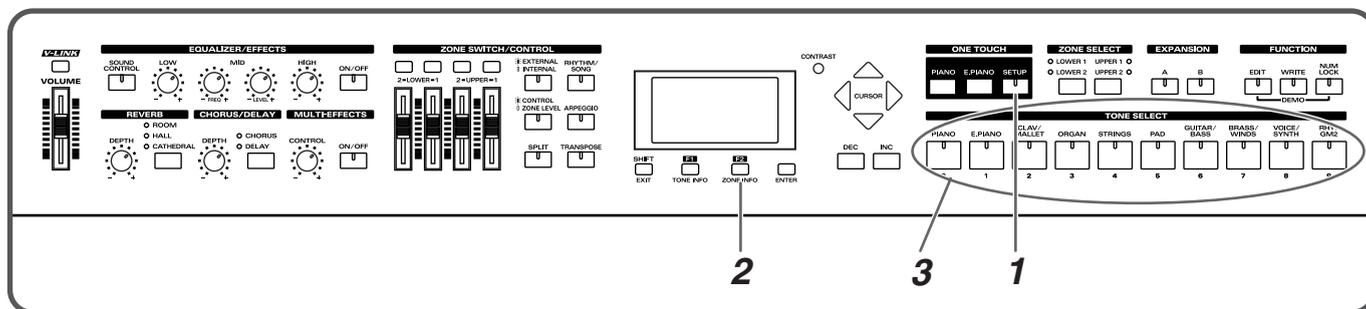
**Press [SETUP], getting the indicator to light.**

At this time, turn [NUM LOCK] off.

The Setup screen, shown below, appears in the display.

```
♩:120     SETUP      ▶
          [000]
      RD SETUP
        BANK  A
   [ASSIGN] [BANK CHANGE]
```

**2**

**Press [F2 (BANK CHANGE)] to select a bank.**

When you press [F1], a list of the Setups registered to the buttons for the selected bank is displayed.

Hold down [F1] and press CURSOR [ ▲ ]/[ ▼ ] to switch the screens.

```
♩:120     SETUP      ▶
          [000]
      RD SETUP
        BANK  B
   [ASSIGN] [BANK CHANGE]
```

**MEMO**

There are four banks, A, B, C, and D. Each time you press [F2], the bank is switched in the following sequence: A → B → C → D → A →...

**3**

**Press one of the TONE SELECT buttons to select a Setup.**

**4**

**Try playing the keyboard.**

The settings are switched to those of the Setup that has been called up.

When the Tone screen is displayed, the [SETUP] indicator lights and the Setup screen appears when CURSOR [ ◀ ] is pressed.

From the Setup screen, you can get back to the Tone screen by pressing CURSOR [ ▶ ].

However, the Tone Wheel screen is displayed if "TW-Organ 1–10" is selected for any Part in the Tone screen.

Refer to **"Simulating the Creation of Organ Tones (Tone Wheel Mode)"** (p. 53).

### Selecting Setups Other Than the Favorite Setups

**1.** **Press [SETUP], getting the indicator to light.**

**2.** **Press [INC]/[DEC] or TONE SELECT buttons to select the Setup to be called up.**

After [INC]/[DEC] is pressed, the following screen appears; the Setup screen then reappears after a few moments.

The screen does not change when the TONE SELECT buttons are used to input Setup numbers. Press [ENTER] afterwards to set the number.

```
♩: 92     SETUP          ▶

      003 RHY: R&B
      004 RHY: Funk
      005 RHY: Pop 1
      006 RHY: Pop 2
      007 RHY: Rock 1
```
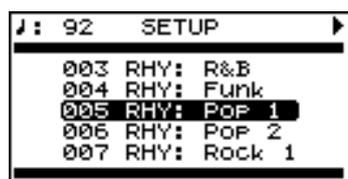
## Registering the Setups You Like (Favorite Setups)

You can also register the Setups you like and use frequently to the TONE SELECT buttons. This function allows you to select Setups more quickly.

You can register a total of 40 setups, ten tones in each of the four banks, to the Favorite Setups.

**1**

**Press [SETUP] to call up the Setup you want to register.**

Make sure [NUM LOCK] is off at this time.

**2**

**Press [F2] to select the bank to which you want to register the Setup.**

**3**

**Hold down [F1] and press the TONE SELECT button for the registration destination.**

The Setup is registered to the button that is pressed.

# Storing Settings to Setups ([WRITE])

If you want to use the changed content as a new Setup, use the following procedure
to save the settings to a Setup.
You can also change the name of a Setup.
You can store 100 Setups on the RD-700SX.



8,9    2 6 4,7  3              4,7              1
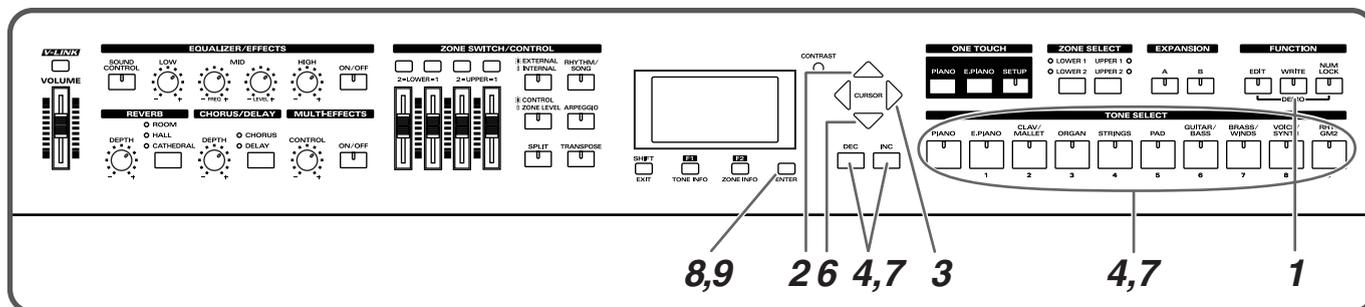
**1**

**Press [WRITE], getting the indicator to light.**

The Setup screen appears.



New Setup Name

Destination

**2**
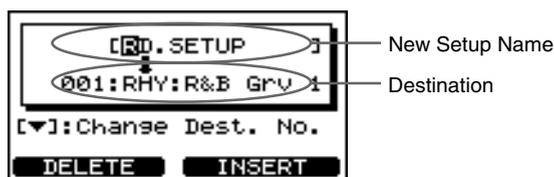
**Press CURSOR [ ◀ ]/[ ▶ ] to move the cursor to the positions where
the characters are to be input.**

**3**

**Press [INC]/[DEC] to enter the characters.**

The following characters are available.

**space, ! " # $ % & ' ( ) * + , - . / 0–9, : ; < = > ? @ A–Z, [ \ ] ^ _ ` a–z, { | } ~**

When [F2] is pressed, a single-character blank space is inserted; pressing [F1] deletes
one character.

**4**

**Repeat steps 2–3 to input the name.**

**5**

**Press CURSOR [ ▼ ] to move the cursor to the destination Setup
name.**

**6**

**Select the save-destination Setup, either by pressing [INC]/[DEC].**

When using the TONE SELECT buttons to input Setup numbers, press [ENTER]
afterwards to set the number.



**MEMO**

You can use the TONE
SELECT buttons to directly
specify and enter characters.

**MEMO**

The file that the file name
starts from ". (dot)" cannot be
written.

**MEMO**

Pressing CURSOR [ ▼ ],
even while inputting the name,
moves the cursor to the save-
destination Setup number.

**7**

**When you have finished determining the save destination and the name for the new Setup, press [ENTER] or [F1].**

The [ENTER] indicator is flashing, and the confirmation message appears.

```
[RD.SETUP    ]
      ↓
001: RHY:R&B Grv 1

Are you sure?
```

If you do not want to save the Setup, press [EXIT] or [WRITE].

The operation is cancelled, and you are returned to the Tone screen.

**8**

**When [ENTER] is pressed, saving of the Setup begins.**

When you have finished saving the Setup, the [WRITE] indicator goes out and you are returned to the Tone screen.

### Settings Not Saved in a Setup

The following settings cannot be saved to a Setup.

- Song Number
- ONE TOUCH [PIANO] and [E.PIANO] Settings (p. 73)
- System Settings (p. 79)
- Sound Control Settings (p. 88)
- V-Link Settings (p. 97)
- Rec Setting (p. 101)

Pressing [F1 (WRITE)] in the Edit screen saves the System, Sound Control, and V-Link settings.

### Setup <000> (PIANO SETUP)

When you press the ONE TOUCH [PIANO] or [E.PIANO], and then press CURSOR

[ ◀ ] to bring up the Setup screen, SETUP<000> is displayed.

```
♩:120    SETUP
          000
      RD SETUP
      BANK A
ASSIGN   BANK CHANGE
```

This SETUP<000> is the Setup containing the stored settings for ONE TOUCH [PIANO] or [E.PIANO]; the contents cannot be overwritten by pressing the [WRITE] as with other Setups.

When saving content changed from the ONE TOUCH [PIANO] or [E.PIANO] settings, write the settings to SETUP<001> or later.

# Using the RD-700SX As a Master Keyboard

By connecting an external MIDI device to the MIDI OUT connector on the RD-700SX's rear panel, you can then control the external MIDI device with the RD-700SX. Normally, the RD-700SX transmits Note messages from the MIDI OUT connector, but when [EXTERNAL/INTERNAL] is on, you can control not only Note messages, but a variety of other external MIDI device settings as well.
You can control internal and external sound generators independently.
Pressing [EXTERNAL/INTERNAL] so the button's indicator is lit enables the RD-700SX to control external MIDI sound modules. You use the [EXTERNAL/INTERNAL] to switch between control of the INTERNAL zone and control of the EXTERNAL zone.
You can also make detailed settings for MIDI messages transmitted to external sound modules.

## What's MIDI?

MIDI (Musical Instrument Digital Interface) is a standard specification that allows musical data to be exchanged between electronic musical instruments and computers. By using a MIDI cable to connect devices that have MIDI connectors, you can create an ensemble in which a single MIDI keyboard can play multiple instruments, or change settings automatically as the song progresses.

### About MIDI Connectors

The RD-700SX has the following three types of MIDI connector. Their functions differ as described below.
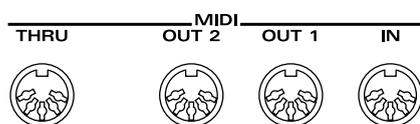


**MIDI IN Connector**
Performance messages from an external MIDI device are received here. These incoming messages may instruct the RD-700SX to play sounds or switch tones.

**MIDI OUT Connector**
MIDI messages are transmitted from this connector to external MIDI devices. The RD-700SX's MIDI OUT connector is used for sending the performance data of the keyboard controller section as well as data used for saving various settings and patterns (Bulk Dump→p. 99).

**MIDI THRU Connector**
MIDI messages received at MIDI IN connectors are re-transmitted without change from this connector to an external MIDI device. Use this in situations such as when you use multiple MIDI devices simultaneously.

### Connecting to External MIDI Sound Generators



☞
**"Connecting the RD-700SX to External Equipment"** (p. 21)

**NOTE**
Messages received via the USB connector are not transmitted from the MIDI THRU connector.
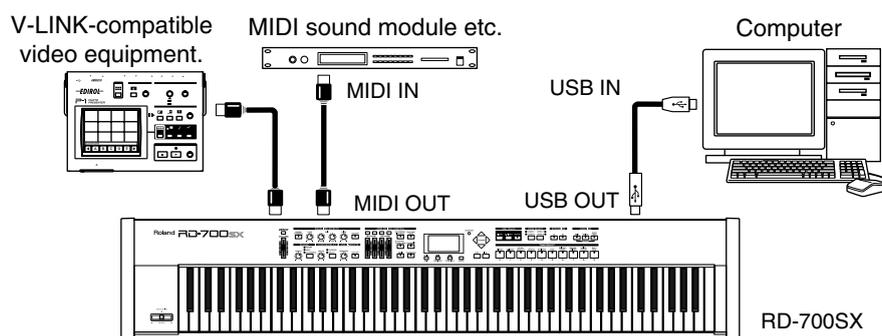
**NOTE**
Use a USB Cable no longer than 3 meters.

# Selecting the MIDI Connector to Use for Output (MIDI OUT Port)

The RD-700SX is equipped with two MIDI connectors and one USB connector.

You can select which MIDI OUT connector or USB connector is used for outputting the signals for each individual zone.

*1*
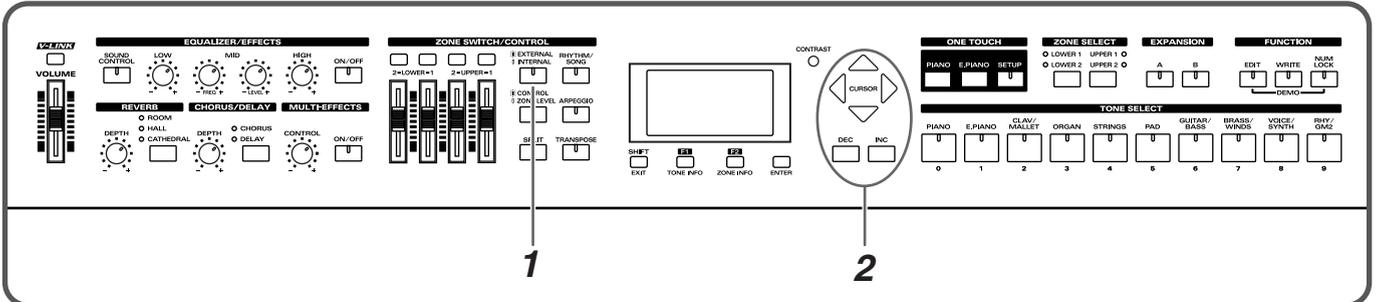
**Press [EXTERNAL/INTERNAL], getting the indicator to light.**

The EXTERNAL screen appears.

If "OUT" doesn't appear on screen, press CURSOR [ ◀ ] several times to display the following screen.

```
♩:120 EXTERNAL ZONE  ▶

       OUT Ch MSB LSB PC
  UP1  ALL  1 087 064 001
  UP2  ALL  2 --- --- ---
  1w1  ALL  3 --- --- ---
  1w2  OFF  4 --- --- ---
      [MIDI OUT Port]
```

**NOTE**

When Rec Mode is set to ON in the Utility Rec Setting in Edit mode, the EXTERNAL screen as shown to the left is not displayed. Set Rec Mode to OFF when setting the MIDI Transmit channel (p. 101).

*2*
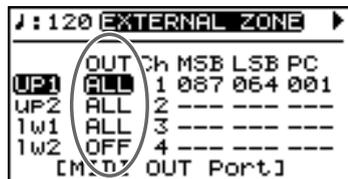
**Press CURSOR [ ◀ ]/[ ▲ ]/[ ▶ ]/[ ▼ ] to move the cursor, then press [INC]/[DEC] to set the connector from which the MIDI messages of each zone are to be output.**

| Part | Parameter | Settings | Description |
|---|---|---|---|
| UP1 (UPPER1) | OUT (MIDI OUT Port) | ALL, 1 (MIDI OUT 1), 2 (MIDI OUT 2), USB | The RD-700SX's performance data is transmitted from the selected connector. |
| UP2 (UPPER2) | | | |
| LW1 (LOWER1) | | | |
| LW1 (LOWER2) | | | |

# MIDI Send Channel Settings

When you have finished connecting the external MIDI device, match the keyboard's Transmit channel and the Receive channel for each of the external MIDI sound generator's Parts. Sounds is produced when the MIDI channels for the sending device (the RD-700SX) and the receiving device (the external MIDI sound generator) are set to the same MIDI channel.



## 1
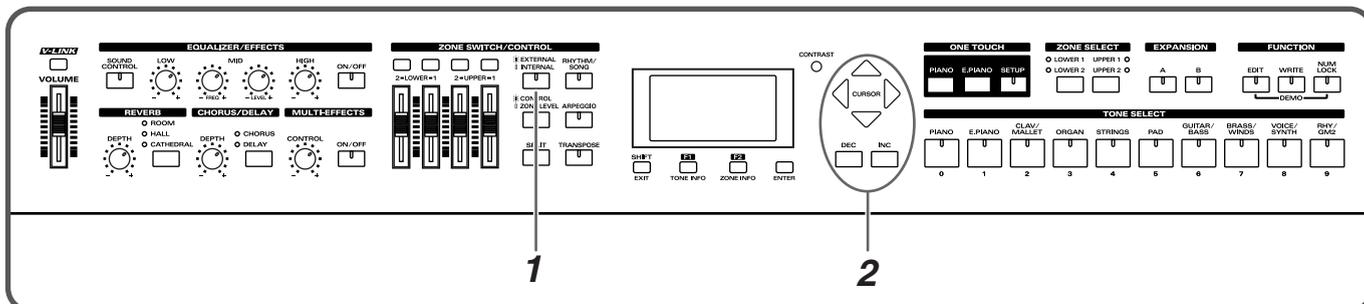
**Press [EXTERNAL/INTERNAL], getting the indicator to light.**

The EXTERNAL screen appears.

If "Ch" doesn't appear on screen, press CURSOR [ ◀ ] several times to display the following screen.



## 2
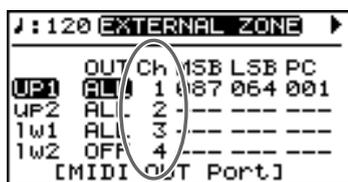
**Press CURSOR [ ◀ ]/[ ▲ ]/[ ▶ ]/[ ▼ ] to move the cursor, then press [INC]/[DEC] to set the Transmit channel (Ch) for each part.**

| Part | Parameter | Settings | Description |
|------|-----------|----------|-------------|
| UP1 (UPPER1) | Ch (MIDI OUT Channel) | 1–16 | RD-700SX performance data is sent over a selected channel. |
| UP2 (UPPER2) | | | |
| LW1 (LOWER1) | | | |
| LW1 (LOWER2) | | | |

**MEMO**

For instructions on setting each of the external MIDI sound generator's Part's Receive channel, refer to the owner's manual for each device.

**NOTE**

When Rec Mode is set to ON in the Utility Rec Setting in Edit mode, the EXTERNAL screen as shown to the left is not displayed. Set Rec Mode to OFF when setting the MIDI Transmit channel (p. 101).

**MEMO**

Part names for Parts in which ZONE SWITCH is set to OFF appear in the display in lowercase letters, such as "up1," "up2," "lw1," and "rw2." MIDI messages for Parts with the ZONE SWITCH set to OFF are not transmitted.

# Selecting Sounds on an External MIDI Device

To switch the tones of an external MIDI device, the program number and the MSB/LSB of the Bank Select message are entered as numerical values on the RD-700SX.

*1*
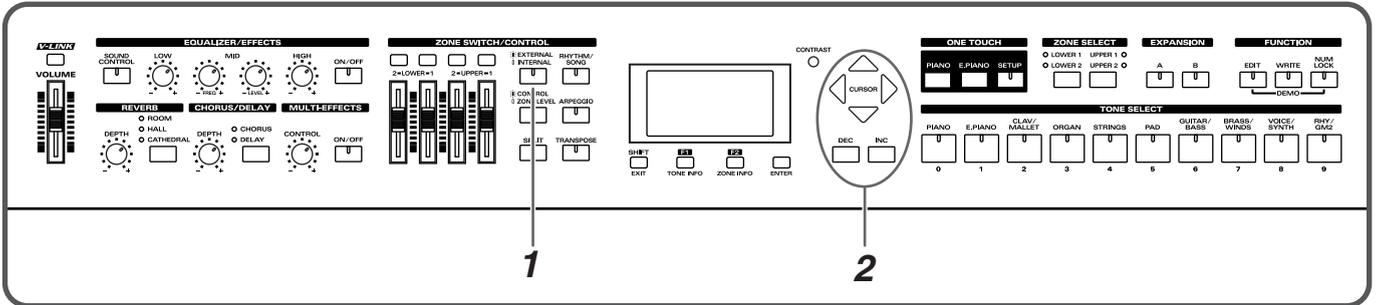
**Press [EXTERNAL/INTERNAL], getting the indicator to light.**

The EXTERNAL screen appears.

If "MSB" doesn't appear on screen, press CURSOR [ ◀ ] several times to display the following screen.

```
♩:120 EXTERNAL ZONE ▶

      OUT CH MSB LSB PC
UP1   ALL  1  087 064 001
UP2   ALL  2  --- --- ---
1w1   ALL  3  --- --- ---
1w2   OFF  4  --- --- ---
      [MIDI OUT Port]
```
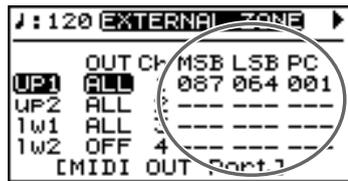
| Parameter | Tx | Settings |
|---|---|---|
| OUT (MIDI OUT Port) | --- | ALL, 1, 2, USB |
| Ch (MIDI Channel) | --- | 1–16 |
| MSB (Bank Select MSB) | CC 00 | 0–127, --- (OFF) |
| LSB (Bank Select LSB) | CC 32 | 0–127, --- (OFF) |
| PC (Program Change) | Program Change | 0–127, --- (OFF) |

*2*

**Press CURSOR [ ◀ ]/[ ▲ ]/[ ▶ ]/[ ▼ ] to move the cursor, then press [INC]/[DEC] to set the MSB, LSB, and PC for each part.**

Pressing [INC] and [DEC] simultaneously switches the settings value to "--- (OFF)."

When this setting is "--- (OFF)," bank select messages will not be transmitted.

**NOTE**

When Rec Mode is set to ON in the Utility Rec Setting in Edit mode, the EXTERNAL screen as shown to the left is not displayed. Set Rec Mode to OFF when setting the MIDI Transmit channel (p. 101).

**NOTE**

If the external MIDI sound generator transmits a Program number or a Bank number for which no Tone has been assigned, an alternate Tone may be selected, or in some cases, there may be no sound played. If you do not want to transmit the Program number or Bank Select, use the procedure described left to set the PC/MSB/LSB to "--- (OFF)."

# Adjusting the Volume of Each Zone (EXTERNAL Zone)



ZONE LEVEL Slider

ZONE SWITCH

[EXTERNAL/INTERNAL] ON (lit)
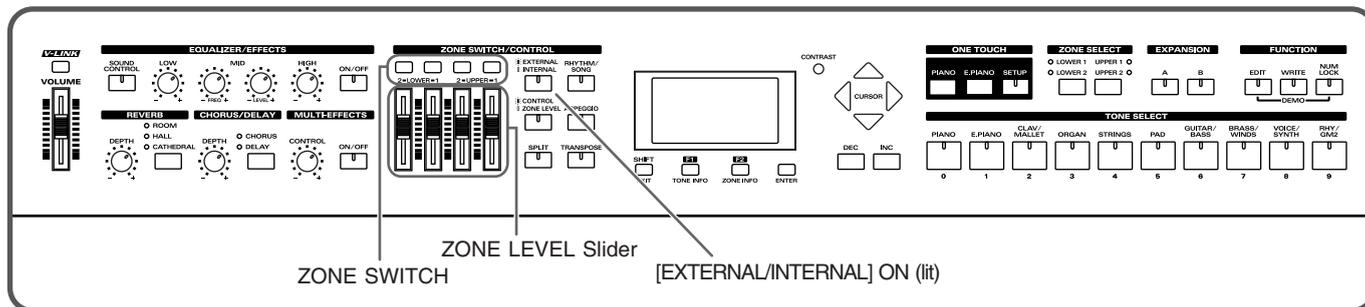
When the [EXTERNAL/INTERNAL] indicator is on, you can use the ZONE SWITCH and ZONE LEVEL sliders to control the EXTERNAL Zone in the same way as with the INTERNAL Zone (p. 28).

## ZONE SWITCH

This setting determines whether or not MIDI messages, including the information for Note On in the EXTERNAL zone, are to be transmitted from MIDI OUT when the [EXTERNAL/INTERNAL] indicator is lit.

When the ZONE SWITCH indicator for a part is lit (on), MIDI messages are transmitted from MIDI OUT when the keys for that part are played.

When the ZONE SWITCH indicator for a part is not lighted (off), MIDI messages are not transmitted from MIDI OUT even when the keys for that part are played.

ZONE SWITCH will turn on or off each time you press it.

## ZONE LEVEL Slider

When the [EXTERNAL/INTERNAL] indicator is on, ZONE LEVEL sliders adjust the volume level of each of the EXTERNAL Zone.

# Detailed Settings for Transmitted Parts (EXTERNAL)

After pressing [EXTERNAL/INTERNAL], you can then set the following parameters affecting EXTERNAL Zone.

```
♩:120 EXTERNAL ZONE ▶
        OUT Ch MSB LSB PC
UP1  ALL  1 087 064 001
UP2  ALL  2 --- --- ---
1W1  ALL  3 --- --- ---
1W2  OFF  4 --- --- ---
     [MIDI OUT Port]
```

```
♩:120 EXTERNAL ZONE ◀▶
     VOL PAN REV CHO M/P
UP1  127 --- --- --- ---
UP2  --- --- --- --- ---
1W1  --- --- --- --- ---
1W2  --- --- --- --- ---
        [Volume]
```

```
♩:120 EXTERNAL ZONE ◀▶
     TRA LWR UPR VRL VRU
UP1  +12 FUL FUL  41 127
UP2    0 FUL FUL   1  40
1W1    0 FUL FUL   1 127
1W2    0 FUL FUL   1 127
     [Key Range Lower]
```

```
♩:120 EXTERNAL ZONE ◀▶
     ATK DCY REL COF RES
UP1  +10 --- --- --- ---
UP2  --- --- --- --- ---
1W1  --- --- --- --- ---
1W2  --- --- --- --- ---
      [Attack Time]
```

```
♩:120 EXTERNAL ZONE ◀▶
     POR P.T Sns MAX
UP1  ---  --- +32 127
UP2  ---  --- +32 127
1W1  ---  10 +32 127
1W2  ---  --- +32 127
     [Portament Sw]
```

```
♩:120 EXTERNAL ZONE ◀▶
     C.T F.T B.R M.D
UP1  --- --- --- ---
UP2  --- --- --- ---
1W1  --- --- --- ---
1W2  --- --- --- ---
    [Modulation Depth]
```

```
♩:120 EXTERNAL ZONE ◀▶
     Dp F1 F2 PB Md
UP1  ☑ ☑ ☑ ☑ ☑
UP2  ☑ ☑ ☑ ☑ ☑
1W1  ☑ ☑ ☑ ☑ ☑
1W2  ☑ ☑ ☑ ☑ ☑
   [Damper Pedal Switch]
```

```
♩:120 EXTERNAL ZONE ◀▶
     LW2 LW1 UP2 UP1
UP1  ☑  ☑  ☑  ☑
UP2  ☑  ☑  ☑  ☑
1W1  ☑  ☑  ☑  ☑
1W2  ☑  ☑  ☑  ☑
   [Ctrl Slider Sw LW2]
```

```
♩:120 EXTERNAL ZONE ◀▶
     CC VAL  CC VAL
UP1   2:127 ---:---
UP2  ---:--- ---:---
1W1  ---:--- ---:---
1W2  ---:--- ---:---
     [CC02: BREATH]
```

## How to Make Settings

1. **Press [EXTERNAL/INTERNAL], getting the indicator to light.**
   The RD-700SX is set to control the external MIDI devices.

   **NOTE**

   When Rec Mode is set to ON in the Utility Rec Setting in Edit mode, the EXTERNAL screen as shown to the left is not displayed. Set Rec Mode to OFF when setting the MIDI Transmit channel (p. 101).

2. **Press CURSOR [ ◀ ]/[ ▲ ]/[ ▶ ]/[ ▼ ] to move the cursor to the parameter to be set.**
   You can get the cursor to move more rapidly by holding down the CURSOR button that points in the direction you want the cursor to move while you also press the CURSOR button that points in the opposite direction.

3. **Press [INC]/[DEC] to set the value.**
   Pressing [INC] and [DEC] simultaneously sets the value to "--- (OFF)."

## Adjusting the Volume and Pan (Volume/Pan)

Sets the volume and the panning (localizes sound image) for each of the Tones.

The Volume setting is mainly used when multiple tones are playing to obtain the desired balance in volume between each part.

The Pan setting positions the sound image of each part when the output is in stereo. With an increase in the value for L, more of the sound will be heard as coming from the left side. Similarly, more of the sound will originate at the right if the value of R is increased. When set to 0, the sound is heard as coming from the center.

| Parameter | TX CC# | Value |
| --- | --- | --- |
| VOL (Volume) | CC07 | --- (OFF), 0–127 |
| PAN (Pan) | CC10 | L64–0–63R, --- (OFF) |

## Setting the Amount of Reverb and Chorus (Reverb/Chorus)

This sets the depth of the reverb and chorus effects.

| Parameter | TX CC# | Value |
| --- | --- | --- |
| REV (Reverb) | CC91 | --- (OFF), 0-127 |
| CHO (Chorus) | CC93 | |

## Playing Sound Monophonically (Mono/Poly)

Specifies whether the tone will play polyphonically (POLY) or monophonically (MONO).

The MONO setting is effective when playing a solo instrument tone such as sax or flute.

| Parameter | Value |
|---|---|
| M/P (Mono/Poly) | --- (OFF), M (MONO, CC126), P (POLY, CC127) |

## Setting the Transposition for Each Individual Zone (Transpose)

You can perform with each zone transposed to a different pitch.

When multiple zones are set to on, you can create a richer sound by setting the two Tones to different octaves. Also, if the Keyboard Mode is set to Split and you are playing a bass Tone in the lower Part, you can use the Transpose function to play the bass at a lower pitch.

| Parameter | Value |
|---|---|
| TRA (Transpose) | -48 – 0 –+48 |

## Setting the Key Range (Key Range Lower/Upper)

Set the keyboard range in which each Zone will sound.

This can be used to make notes in different areas of the keyboard play different Tones.

Specify the lower limit (LWR) and upper limit (UPR) of the key range being set.

You can also set this by pressing a specific key and then pressing [ENTER].

| Parameter | Value |
|---|---|
| LWR (Key Range Lower) | A0–C8 |
| UPR (Key Range Upper) | |

**NOTE**

This is effective only when [SPLIT] is on (p. 38) in the key range settings.

**MEMO**

"FUL" is displayed when [SPLIT] is set to OFF. In this case, [SPLIT] is automatically switched on when the value is changed to something other than "FUL" with [INC]/[DEC].

**NOTE**

You cannot set the key range's lower limit higher than the upper limit, nor can you set the upper limit below the lower limit.

**MEMO**

You can use ZONE SWITCH for each individual zone to select whether or not MIDI Note messages for that zone are to be transmitted (p. 64).

## Changing the Range That Plays in Response to the Velocity (Velocity Range Lower/Upper)

This specifies the lower limit (LWR) and upper limit (UPR) of the range in which the tone is played according to how strongly the keys are played (velocity). Make this setting when you want the tone to change depending on the key velocity.

| Parameter | Value |
|---|---|
| VRL (Velocity Range Lower) | 1–127 |
| VRU (Velocity Range Upper) | |

**NOTE**

If you set the minimum velocity to a value above the upper limit, or set the maximum velocity to a value that is below the lower limit, the setting for the other limit is changed to the same value.

## Changing Tone Elements (ATK/DCY/REL/COF/RES)

You can make changes in tones by adjusting the settings of the following four elements.

**ATK (Attack Time Offset):**

The time it takes after the key is pressed for a sound to reach full volume.

**DCY (Decay Time Offset):**

The time it is to take following the attack for the volume to decrease.

**REL (Release Time Offset):**

The time it takes after the key is released for a sound to become inaudible.

**COF (Cutoff Offset):**

Adjusts how much the filter is opened.

**RES (Resonance Offset):**

This boosts the portions in the region around the cutoff frequency, lending a particular quality to the sound. Excessively high settings can produce oscillation, causing the sound to distort.

| Parameter | TX CC# | Value | Description |
|---|---|---|---|
| ATK | CC73 | --- (OFF), -64–+63 | Higher values produce a milder attack; lower values produce a sharper attack. |
| DCY | CC75 | | The time it takes for the volume to fall increases as the value is raised; lowering the value decreases the decay time. |
| REL | CC73 | | Higher values produce longer decay; set lower values for a clear-cut sound. |
| COF | CC74 | | Higher values brighten the sound; lower values make the sound seem darker. |
| RES | CC71 | | Higher value makes the special quality of the sound stronger; lower value reduce these characteristics. |

## Smoothly Changing the Pitch (Portamento)

Portamento is a function that causes the pitch to change smoothly from one note to the next note played.

The Portamento Time setting determines the time for the change in pitch when the portamento effect is applied to the sound. Higher settings will cause the pitch change to the next note to take more time.

| Parameter | TX CC# | Value |
|---|---|---|
| POR (Portamento Switch) | CC65 | ---, OFF, ON |
| P.T (Portamento Time) | CC5 | ---, 0–127 |

## Setting the Change in Volume According to the Force Used to Play the Keyboard (Velocity Sensitivity/Max)

Set the change in volume that occurs in response to the force used to play the keyboard (velocity) and the maximum value of the change.

| Parameter | Value | Description |
|---|---|---|
| SNS (Velocity Sensitivity) | -63–+63 | This setting determines how the volume changes in response to the velocity.<br>The volume is increased as the keyboard is played with greater force when a positive Value is used; when a negative value is selected, the volume decreases as the keys are played with greater force. If this is set to "0," the volume will not be affected by the strength of your playing on the keyboard. |
| MAX (Velocity Max) | 1–127 | Maximum velocity value for the corresponding key.<br>Lowering this value will produce softer notes even if you play the keyboard strongly. |

## Changing the Pitch (Coarse Tune/Fine Tune)

This makes settings related to the pitch of each Part.

| Parameter | RPN | Description | Value |
|---|---|---|---|
| C.T (Coarse Tune) | 00H/ 02H | Sets the sound's pitch in semitone units. | --- (OFF), -48– +48 (+/- 4 octaves) |
| F.T (Fine Tune) | 00H/ 02H | Sets the sound's pitch in units of one cent. | --- (OFF), -50– +50 (+/- 50 cents), |

**MEMO**

1 cent = 1/100 semitone

## Setting the Range for the Change in Pitch with the Bender (Bend Range)

This sets the amount of pitch change that will occur when you move the Pitch Bend lever (4 octaves).

| Parameter | RPN | Value |
|---|---|---|
| B.R (Bend Range) | 00H/00H | --- (OFF), 0–48 (semitone) |

## Setting the Amount of Modulation Applied (Modulation Depth)

This sets the depth of the effect when the Modulation lever is tilted.

| Parameter | RPN | Value |
|---|---|---|
| M.D (Modulation Depth) | 00H/05H | --- (OFF), 0–127st |

## Turning Each Controller On and Off

These settings determine whether the external MIDI device is controlled (ON), or not (OFF) by the pedals connected to each PEDAL jack, the slider, the Modulation lever, and the Bender.

| Parameter | Description | Value |
|---|---|---|
| Dp | Damper pedal | ON, OFF |
| F1 | Pedal connected to the FC1 jack | |
| F2 | Pedal connected to the FC2 jack | |
| PB | Pitch Bender | |
| Md | Modulation Lever | |
| UP1 | Control Slider (UP1) | |
| UP2 | Control Slider (UP2) | |
| LW1 | Control Slider (LW1) | |
| LW2 | Control Slider (LW2) | |

## Transmitting the Control Change (USER CC/USER CC Value)

You can make two types of settings here, the Control Change message to be transmitted and the value for the Control Change.

| Parameter | Value |
|---|---|
| CC1 (User CC1) | OFF, 0–127 |
| Value (User CC1 Value) | |
| CC2 (User CC2) | |
| Value (User CC2 Value) | |

# Making Detailed Settings for Tones

## Making Zone Settings (Zone Info)

The sixteen Parts played by the RD-700SX's internal sound generator are referred to as "Internal Parts."

Of the sixteen Internal Parts, you can select four of them to function as the four Parts (UPPER1, UPPER2, LOWER1, and LOWER2) which can be freely controlled with the RD-700SX's buttons and keyboard. These four Parts are collectively known as the "Zone."

You can perform operations like Split with the INTERNAL Zone very simply using the RD-700SX's keyboard, and you can make more detailed settings for the Zone as well.

**NOTE**

Depending on the tone selected, there may be parameters that cannot be altered.

### How to Make Settings

1. **In the Tone screen, press [F2 (Zone Info)].**

   The [F2] is lit, and the Zone Info screen appears.

   ```
   ♩:120  ZONE INFO   ◄►
               TONE
   UP1  001 Superior Grd
   uP2  093 SX Strings 1
   lw1  148 SX Ac.Bass
   lw2  115 Soft Pad
               [TONE]
   ```
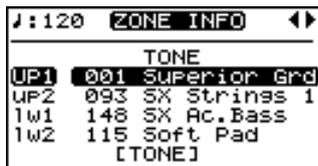
   The names of zones that have Zone SW set to OFF are shown in lowercase letters.

2. **Press CURSOR [ ◄ ]/[ ► ] to switch screens.**

3. **Press CURSOR [ ◄ ]/[ ▲ ]/[ ► ]/[ ▼ ] to move the cursor to the parameter to be set.**

   ```
   ♩:120  ZONE INFO   ◄►
         VOL PAN FX1 FX2
   UP1  127   0   ☑   ☐
   uP2  100   0   ☐   ☑
   lw1  100   0   ☐   ☐
   lw2  100   0   ☐   ☐
             [MFX1 Source]
   ```
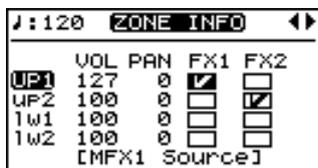
4. **Press [INC]/[DEC] to set the value.**

   Pressing [INC] and [DEC] simultaneously sets that parameter to the standard default value.

5. **When you finish making settings, press [F2], extinguishing its indicator.**

   You are returned to the Tone screen.

## Selecting the Tone

When the zone to be set is selected, the name of the assigned tone appears.
You can select tone using the TONE SELECT buttons.

| Parameter | Value |
|-----------|-------|
| Tone | Refer to **"Tone List"** (p. 146) |

## Setting the Volume and Pan (Volume/Pan)

Sets the volume and the panning (localizes sound image) for each of the Zones.

The Volume setting is mainly used when multiple tones are playing to obtain the desired balance in volume between each zone.

The Pan setting localizes the sound image of each zone when the output is in stereo. With an increase in the value for L, more of the sound will be heard as coming from the left side. Similarly, more of the sound will originate at the right if the value of R is increased. When set to 0, the sound is heard as coming from the center.

| Parameter | Value |
|-----------|-------|
| VOL (Volume) | 0–127 |
| PAN | L64–0–R63 |

## Setting the Zone to Which Multi-effects Are Applied (MFX1/MFX2 Source)

This setting determines the zone to which multi-effects are applied.

| Parameter | Value |
|-----------|-------|
| FX1 (MFX1 Source) | ON, OFF |
| FX2 (MFX2 Source) | |

**NOTE**

Multi-effects can be applied to only one zone. Once one zone has been switched on, the same multi-effect is switched off in the other zones.

**NOTE**

You can apply either MFX1 or MFX2 (not both) to a zone. If both MFX1 and MFX2 are switched on for the same zone, MFX2 alone will be the one that is actually applied.

## Setting the Transposition for Each Individual Zone (Transpose)

You can perform with each Zone transposed to a different pitch. When multiple tones are playing, you can create a richer sound by setting the two Tones to different octaves. Also, if the Keyboard Mode is set to Split and you are playing a bass Tone in the lower Zone, you can use the Transpose function to play the bass at a lower pitch.

| Parameter | Value |
|---|---|
| TRA (Transpose) | -48–0–+48 |

**MEMO**

You can also set the same degree of transposition for all parts with [TRANSPOSE]. For details, refer to **"Transposing the Key of the Keyboard ([TRANSPOSE])"** (p. 42).

## Setting the Key Range for Each Zone (Key Range)

When [SPLIT] is pressed in normal performance conditions, the key range is divided at the Split Point, and you can play with two different tones on one keyboard.

Using Key Range allows you to make even more detailed key range settings.

This sets the lower and upper limit of the key range in each part.

After moving the cursor to the parameter to be set, you can make the setting by pressing the designated key and [ENTER].

| Parameter | Value |
|---|---|
| LWR (Key Range Lower) | A0–C8 |
| UPR (Key Range Upper) | |

**NOTE**

This is effective only when [SPLIT] is on (p. 38) in the key range settings.

**MEMO**

"FUL" is displayed when [SPLIT] is set to OFF. In this case, [SPLIT] is automatically switched on when the value is changed to something other than "FUL" with [INC]/[DEC].

**NOTE**

You cannot set the key range's lower limit higher than the upper limit, nor can you set the upper limit below the lower limit.

**NOTE**

When the split point (p. 39) is changed, the Key Range value also changes.

## Setting the Change in Volume According to the Force Used to Play the Keyboard (Velocity Range/Sens/Max)

This setting determines how the volume changes in response to the force used to play the keyboard (velocity) and the maximum value of the change.

**NOTE**

This setting is disregarded with certain tones.

| Parameter | Value | Description |
|---|---|---|
| VRL (Velocity Range Lower) | 1–127 | This specifies the lower limit (VLW) and upper limit (VUP) of the range in which the tone is played according to the velocity. Make this setting when you want the tone to change depending on the key velocity. |
| VRU (Velocity Range Upper) | 1–127 | |
| Sns (Velocity Sensitivity) | -63–+63 | This setting determines how the volume changes in response to the velocity. The volume is increased as the keyboard is played with greater force when a positive Value is used; when a negative value is selected, the volume decreases as the keys are played with greater force. If this is set to "0," the volume will not be affected by the strength of your playing on the keyboard. |
| Max (Velocity Max) | 1–127 | Maximum velocity value for the corresponding key. Lowering this value will produce softer notes even if you play the keyboard strongly. |

## Assigning Internal Parts to INTERNAL Zone (Part Assign)

This determines which internal Parts are assigned to the INTERNAL Zone.

| Parameter | Value |
|---|---|
| P.A (Part Assign) | 1–16 |

## Turning the Controllers in Each Zone On and Off

These settings determine whether the pedals connected to each PEDAL jack (DaMPER, FC1, FC2), the Modulation lever, the Bender, and the Slides are used to control the Parts (ON), or not (OFF).

| Parameter | Description | Value |
|-----------|-------------|-------|
| Dp | Damper pedal | ON, OFF |
| F1 | Pedal connected to the FC1 jack | |
| F2 | Pedal connected to the FC2 jack | |
| PB | Pitch Bender | |
| Md | Modulation Lever | |
| UP1 | Control Slider (UP1) | |
| UP2 | Control Slider (UP2) | |
| LW1 | Control Slider (LW1) | |
| LW2 | Control Slider (LW2) | |

# Making Tone Settings (Tone Info)

You can make more detailed settings to the tones assigned to each of the Internal parts.

**NOTE**

In certain selected Tones, there may be parameters that cannot be changed.

## How to Make Settings

1. **In the Tone screen, press [F1(Tone Info)].**

   The [F1] is lit, and the Tone Info screen appears.

   ```
   ◀ TONE INFO      ▶

   <Part> Part 1(UPPER1)
   Tone: 001 Superior Grd
   Reverb Amount:     100
   Chorus Amount:       0
   MFX: 78 SYM.RESONANCE
   Mono/Poly:        POLY
   ```

2. **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

   ```
   ◀ TONE INFO      ▶

   <Part> Part 1(UPPER1)
   Tone: 001 Superior Grd
   Coarse Tune:         0
   Fine Tune:           0
   Portamento Switch:OFF
   Portamento Time:    20
   ```

3. **Press [INC]/[DEC] to set the value.**

4. **When you finish making settings, press [F1], extinguishing its indicator.**

   You are returned to the Tone screen.

   **NOTE**

   The following parameters cannot be changed when the selected tone is used as the Virtual Tonewheel tone.

   - Mono/Poly
   - Coarse Tune
   - Fine Tune
   - Portamento Switch
   - Portamento Time
   - Attack Time
   - Release Time
   - Cutoff
   - Resonance
   - Decay Time

## Selecting the Part and the Tone to Be Set (Part, Tone)

Choose the Part and the Tone for which you want to make settings.

| Parameter | Value |
|---|---|
| <Part> | 1–16<br>Parts assigned to the INTERNAL Zone are indicated by a marker (UPPER1) appearing after the part name. |
| Tone | When the part to be set is selected, the name of the assigned tone appears.<br>You can select tone using the TONE SELECT buttons. |

## Setting the Reverb/Chorus Depth (Reverb/Chorus Amount)

This sets the depth of the reverb and chorus effects.

**NOTE**

When this value is set to "0," no reverb or chorus effect is applied when the REVERB [DEPTH] or CHORUS [DEPTH] knob is turned.

| Parameter | Value |
|---|---|
| Reverb Amount | 0–127 |
| Chorus Amount | |

**NOTE**

The manner in which the effect is applied will differ depending on the settings for MFX Source (p. 86) and MFX1 Dest (p. 87).

- When MFX1 Dest is set to ALL PART

  The Reverb/Chorus Amount setting for the part selected for MFX Source applies to all parts. However, when the MFX Source is set to FIXED, the Reverb/Chorus Amount setting for UPPER 1 applies to all parts.

- When MFX1 Dest is set to SAME MFX

  The Reverb/Chorus Amount setting for the part selected for MFX Source applies to parts assigned the same MFX Type as the part selected for MFX Source.

## Changing the Effect Applied to the Tone (MFX Type)

This sets the multi-effect applied to the tone.

**NOTE**

The MFX selected here may not be applied with certain MFX Source and MFX Dest settings. For details, refer to **"MFX Source"** (p. 86), **"MFX Dest"** (p. 87).

| Parameter | Value |
|---|---|
| MFX TYPE | Refer to **"Effect/Parameter List"** (p. 112). |

## Playing Sound Monophonically (Mono/Poly)

Specifies whether the tone will play polyphonically (POLY) or monophonically (MONO).
The MONO setting is effective when playing a solo instrument tone such as sax or flute.
Additionally, when this is set to "MONO LEGATO," you can have monophonic performances played legato. Legato is a playing style in which the spaces between notes are smoothed, creating a flowing feel with no borders between the notes. This creates a smooth transition between notes, which is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist.

| Parameter | Value | Description |
|---|---|---|
| Mono/Poly | MONO | Only the last-played note will sound. |
| | POLY | Two or more notes can be played simultaneously. |
| | MONO LEGATO | Legato is applied to monophonic performances. |

## Changing the Pitch (Coarse Tune/Fine Tune)

This sets the pitch of the tone.

| Parameter | Value | Description |
|---|---|---|
| Coarse Tune | -48–+48 (+/- 4 octaves) | Sets the sound's pitch in semitone units. |
| Fine Tune | -50–+50 (+/- 50 cents) | Sets the sound's pitch in units of one cent. |

**MEMO**
1 cent = 1/100 semitone

**NOTE**
With some Tones, there may be ranges in which the pitch does not change as intended.

## Creating Smooth Pitch Changes (Portamento Switch/Time)

Portamento is a function that causes the pitch to change smoothly from one note to the next note played.
With the Mono/Poly parameter set to MONO, portamento is especially effective when simulating playing techniques such as a violin glissandos.
The Portamento Time setting determines the time for the change in pitch when the portamento effect is applied to the sound. Higher settings will cause the pitch change to the next note to take more time.

| Parameter | Value |
|---|---|
| Portamento Sw | ON, OFF |
| Portamento Time | 0–127 |

## Changing Tone Elements (Attack Time/Release Time/Cutoff/ Resonance/Decay Time)

You can make changes in tones by adjusting the settings of the following four elements.

**Attack Time Offset:**

The time it takes after the key is pressed for a sound to reach full volume.

**Release Time Offset:**

The time it takes after the key is released for a sound to become inaudible.

**Cutoff Offset:**

Adjusts how much the filter is opened.

**Resonance Offset:**

Emphasizes the overtones in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.

**Decay Time Offset:**

The time it is to take following the attack for the volume to decrease.

**NOTE**

Making abrupt changes in the settings values may cause the sound to become distorted or overly loud. Carefully monitor volume levels while making the settings.

| Parameter | Value | Description |
|---|---|---|
| Attack Time (Offset) | -64–+63 | Higher values produce a milder attack; lower values produce a sharper attack. |
| Release Time (Offset) | | Higher values produce longer decay; set lower values for a clear-cut sound |
| Cutoff (Offset) | | Higher values brighten the sound; lower values make the sound seem darker. |
| Resonance (Offset) | | Higher value makes the special quality of the sound stronger; lower value reduce these characteristics. |
| Decay Time (Offset) | | The time it takes for the volume to fall increases as the value is raised; lowering the value decreases the decay time. |

**NOTE**

With some Tones, the effect does not work as intended.

## Changing the Bend Range (Bend Range)

This sets the amount of pitch change that will occur when you move the Pitch Bend lever (2 octaves).

| Parameter | Value |
|---|---|
| Bend Range | 0–24 (semitone) |

# Making Detailed Settings for the ONE TOUCH Tones

## Making Detailed Settings for the Piano Tones (Piano Edit)

You can make more detailed settings to fashion just the Tones you want using the piano Tone selected by pressing ONE TOUCH [PIANO] (p. 32).

This function is called "Piano Edit."

Furthermore, you can save up to two of the changed settings. The Piano Edit settings and ONE TOUCH [PIANO] Type A or B is stored in memory.

**NOTE**
When ONE TOUCH [PIANO] is pressed, all settings other than the Piano Edit settings are switched to their status at the time the RD-700SX's power was turned on. Store any arrangements of settings that you want to keep in Setup (p. 58).

### Making the settings

**1. Press [F1] in the ONE TOUCH [PIANO] screen to select the type you want to set.**
Pressing [F1] toggles you between Types A and B.

**2. Press [F2 (EDIT)].**
A Piano Edit screen will appear.

```
    PIANO EDIT 1    ▶
001 Superior Grd
Stereo Width: L63-63R
Nuance:         TYPE1
Ambience:         OFF
Reverb Level:      20
   WRITE    RETURN
```

**3. Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**
Move the cursor to one of the following menus and press [ENTER], then select the parameter you want to set in the screen that follows.
1. Key Touch Edit
2. Micro Tune Edit
3. Sym. Resonance
4. Tone Modify
5. Initialize

**4. Press [INC]/[DEC] to set the value.**

**5. If you want to save the setting, press [F1 (WRITE)].**
The confirmation message appears. Press [F1 (WRITE)] to save the settings. If you want to cancel, press [EXIT].

**6. When you finish making settings, press [EXIT].**
You are returned to the ONE TOUCH [PIANO] screen.

**NOTE**
Depending on the piano Tone selected, this setting may not be available.

### Selecting the Piano Sound

This chooses the piano Tone to be selected when ONE TOUCH [PIANO] is pressed.
There are 20 Tones to choose from.

### Changing the Width of the Sound (Stereo Width)

Adjusts the spaciousness of the sound.

| Parameter | Value | Description |
|---|---|---|
| Stereo Width | CENTER, L01-01R–L63-63R | The higher the value set, the wider the sound is spread out. |

### Changing the Sound's Nuance (Nuance)

This changes the Tone's subtle nuances by altering the phase of the left and right sounds.

| Parameter | Value |
|---|---|
| Nuance | TYPE1, 2, 3 |

**NOTE**
This effect is difficult to hear when headphones are used.

### Changing the Sense of Space Surrounding the Sound (Ambience)

Changing the sound's ambience allows you give your performances a sound resembling that obtained in a wide open space.

| Parameter | Value | Description |
|---|---|---|
| Ambience | OFF, 1–5 | The effect becomes deeper as the value is increased. |

### Changing the Amount of Reverb Effect (Reverb Level)

Adjusts the depth of the Reverb effect. This functions the same way as the REVERB knob, but the setting made here can be called up simply by pressing ONE TOUCH [PIANO].

| Parameter | Value | Description |
|---|---|---|
| Reverb Level | 0–127 | The reverb effect becomes stronger as the value is increased. |

## Opening/Closing the Piano Lid (Lid)

Reproduces the way the brightness of a grand piano's sound is affected by how much the piano's lid is opened.

| Parameter | Value | Description |
|---|---|---|
| Lid | 1–6 | The lid is opened more as the value is increased, creating a brighter sound. |

## Changing the Characteristics of the Mic (Mic Type/Distance)

This changes the sound of the instrument in a manner similar to that accomplished in recordings of miked acoustic instruments like pianos, where the sound is changed by using mics with different characteristics and changing the mic placement. This function is a virtual reproduction of these phenomena.

| Parameter | Value | Description |
|---|---|---|
| Mic Type | OFF | No microphone is used. |
| | CONDENSER | This is a simulation of a small condenser mic used for musical instruments. The mic features a very bright high end. |
| | DYNAMIC | This simulates the type of dynamic mic used widely for vocals and instruments. |
| Distance | 0–10 | The distance to the microphone decreases as the value is raised, and the distance increases as the value is lowered. |

## Adjusting the Resonant Sounds When the Keys are Pressed (String Resonance)

When the keys are pressed on an acoustic piano, the strings for keys that are already pressed also vibrate sympathetically. The function used to reproduce is called "String Resonance."

| Parameter | Value | Description |
|---|---|---|
| String Resonance | OFF, 1–5 | Increasing the value will increase the amount of effect. |

## Making the Midrange Equalizer Settings (EQ SW/EQ Gain/EQ Frequency/EQ Q)

This sets the midrange equalization.

| Parameter | Value | Description |
|---|---|---|
| EQ SW | ON, OFF | This determines whether the following EQ Gain, EQ Frequency, and EQ Q settings are enabled (ON), or not (OFF). |

| Parameter | Value | Description |
|---|---|---|
| EQ Gain | -12.0–+12.0 dB | Change the amount of equalization (gain). |
| EQ Frequency | 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000Hz | Set Frequency Point. Changes the level of the selected frequency range, with frequency selected here at the center. |
| EQ Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Adjusts the "Q" (bandwidth) of equalization. The higher the value, the narrower the range of frequencies that are affected. |

## Changing the Key Touch (Key Touch)

You can make advanced settings for the touch used for the keys.

| Parameter | Value | Description |
|---|---|---|
| Key Touch | SUPER LIGHT | An even lighter setting than LIGHT. |
| | LIGHT | This sets the keyboard to a light touch. You can achieve fortissimo (ff) play with a less forceful touch than usual, so the keyboard feels lighter. This setting makes it easy to play, even for children. |
| | MEDIUM | This sets the keyboard to the standard touch. You can play with the most natural touch. This is the closest to the touch of an acoustic piano. |
| | HEAVY | This sets the keyboard to a heavy touch. You have to finger the keyboard more forcefully than usual in order to play fortissimo (ff), so the keyboard touch feels heavier. Dynamic fingering adds even more feeling to what you play. |
| | SUPER HEAVY | An even heavier setting than HEAVY. |

**NOTE**

This setting is switched automatically according to the value of Key Touch Offset, which follows.

**NOTE**

Changing this setting also changes the Key Touch setting in Edit Mode (p. 83).

## Making Fine Adjustments to the Keyboard Touch (Key Touch Offset)

This setting provides even more precise adjustment of the key touch than available with the Key Touch setting alone.

This allows you to adjust between Key Touch settings values.

| Parameter | Value | Description |
|-----------|-------|-------------|
| Key Touch Offset | -10–+9 | The touch sensitivity becomes heavier as the value increases. |

**NOTE**

When this settings value continues into the positive or negative direction, the Key Touch's five-step value is switched automatically in accordance with that value.

## Setting a Constant Volume Level in Response to the Playing Force (Velocity)

This sets the sound to play at a fixed volume, regardless of the strength used to play the keyboard (the velocity).

| Parameter | Value | Description |
|-----------|-------|-------------|
| Velocity | REAL | Volume levels and the way sounds are played change in response to the velocity. |
| | 1–127 | Values for the volume and the way sounds are played remain constant. |

## Changing the Timing of Sounds in Response to the Velocity (Velocity Delay Sens)

This sets the interval from the time the key is played to when the sound is produced.

As the value is decreased, the timing of the sound is delayed more when more force is used to play the keys.

As the value is increased, the timing of the sound is delayed more when less force is used to play the keys.

| Parameter | Value |
|-----------|-------|
| Velo Delay Sens | -63–+63 |

## Changing the Touch Sensitivity According to the Key Range (Velocity Keyfollow Sens)

This setting changes the touch sensitivity according to the key range being used.

As the value is increased, the touch becomes heavier in the upper registers, and lighter in the lower keys.

| Parameter | Value |
|-----------|-------|
| Velo Keyfolw Sens | -63–+63 |

## Finely Adjusting the Tuning (Micro Tune)

This procedure allows micro-tuning of each individual key.

| Parameter | Value |
|-----------|-------|
| Type | PRST (PRESET), USER, 1–14 |

1. **Select "2. Micro Tune Edit" in Step 3 of the piano edit settings procedure (p. 73), then press [ENTER].**

   The Micro Tune Edit screen appears.
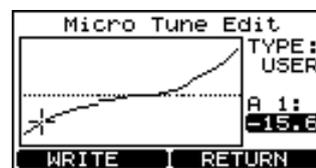
   

   Pressing [EXIT] returns you to the immediately preceding screen.

2. **Press CURSOR [ ▲ ] to move the cursor to the "TYPE."**

3. **Press [INC]/[DEC] to select the type.**

4. **Press CURSOR [ ▼ ] to move the cursor to the numerical value (Offset).**

5. **Press the key to specify it as the one you want to tune.**

6. **Press [INC]/[DEC] to adjust the value.**

7. **If you want to save the setting, press [F1 (WRITE)].**

   The setting is saved to "USER."

## Adjusting Resonance when the Damper Pedal is Depressed (Sympathetic Resonance)

You can adjust this resonance when the damper pedal is depressed.

On an acoustic piano, holding down the damper pedal will allow the remaining strings to resonate in sympathy with the sounds that you played from the keyboard, adding a rich resonance. This feature reproduces that resonance sound.

| Parameter | Value | Description |
|-----------|-------|-------------|
| Resonance Depth | 0–10 | The volume of the resonance increases as the value is raised. |
| Resonance Pitch | | Adjusts the amount of the wavering effect. The wavering effect increases as the value is raised. |
| Resonance Level | | The volume of the wavering effect increases as the value is raised. |

## Changing Sound Characteristics (Tone Modify)

You can make changes in tones by adjusting the settings of the elements.

**Decay Time Offset:**

The time it is to take following the attack for the volume to decrease.

**Cutoff Offset:**

Adjusts how much the filter is opened.

**Release Time Offset:**

The time it takes after the key is released for a sound to become inaudible.

| Parameter | Value | Description |
|---|---|---|
| Decay Time (Offset) | -64–+63 | The time it takes for the volume to fall increases as the value is raised; lowering the value decreases the decay. |
| Cutoff (Offset) | | Higher values brighten the sound; lower values make the sound seem darker. |
| Release Time (Offset) | | Higher values produce longer decay; set lower values for a clear-cut sound. |

**NOTE**

With certain tones, the effect may be difficult to distinguish.

## Restore the settings to initial conditions (Initialize)

This restores the One Touch E. Piano settings to their initial conditions.

1.  **In Step 3 of the Piano Edit settings instructions (p. 73), select "5. Initialize" and press [ENTER].**
    To cancel the Initialize, press [EXIT].

2.  **Press [ENTER].**
    The confirmation message appears.

3.  **Press [ENTER] once again.**
    The ONE TOUCH [PIANO] tones are initialized.

## Making Detailed Settings for the E.Piano Tones (E.Piano Edit)

You can make more detailed settings to fashion just the Tones you want using the E.piano Tone selected by pressing ONE TOUCH [E.PIANO] (p. 32).

This function is called "E.Piano Edit."

The settings made in E.Piano Edit are stored to ONE TOUCH [E.PIANO].

**NOTE**

When ONE TOUCH [E.PIANO] is pressed, all settings other than the E.Piano Edit settings are switched to their status at the time the RD-700SX's power was turned on. Store any arrangements of settings that you want to keep in Setup (p. 58).

## Making the settings

1.  **Press [F1] in the ONE TOUCH [E.PIANO] screen to select the type you want to set.**

2.  **Press [F2].**

```
       E.PIANO EDIT 1        ▶
021: SX.E.Piano 1
AMP Type:             EP-AMP
Effect Type:          Phaser
Effect Depth:             20
Effect Rate:              60
     WRITE         RETURN
```

3.  **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

4.  **Press [INC]/[DEC] to set the value.**

5.  **If you want to save the setting, press [F1 (WRITE)].**
    The confirmation message appears. Press [F1 (WRITE)] to save the settings. If you want to cancel, press [EXIT].

6.  **When you finish making settings, press [EXIT].**
    You are returned to the ONE TOUCH [E.PIANO] screen.

## Selecting the E.Piano Sound

This chooses the piano Tone to be selected when ONE TOUCH [E.PIANO] is pressed.

There are 21 Tones to choose from.

## Selecting the Amp Type(AMP Type)

In the past, the sounds of electric pianos and similar instruments were always played through some kind of instrument amp.

The function simulates the sonic characteristics of these instrument amps.

| Parameter | Value | Description |
|-----------|-------|-------------|
| AMP Type | OFF | No amp is used. |
| | EP-AMP | This simulates the amp section of a vintage electric piano featuring a built-in amp. |
| | GTR-AMP | This simulates a multipurpose guitar amp. |

## Applying Effects to the Sound (Effect Type/Depth/Rate)

You can use effects that are often used with electric pianos.

| Parameter | Value | Description |
|-----------|-------|-------------|
| Effect Type | OFF, CHORUS, TRERMOLO, AUTO-WAH, PHASER | Selecting the type of effects. |
| Effect Depth | 0–127 | This sets the amount of effect applied to the sound. Increasing the value deepens the effect, while the effect gets weaker at lower values. |
| Effect Rate | 1–200 | This sets the rate of the effect's cycling. Increasing the value deepens the effect, while the effect gets weaker at lower values. |

## Making the Midrange Equalizer Settings (EQ-SW/EQ Gain/ EQ Frequency/EQ Q)

This sets the midrange equalization.

| Parameter | Value | Description |
|-----------|-------|-------------|
| EQ SW | ON, OFF | This determines whether the following EQ-Freq, EQ Gain, and EQ Q settings are enabled (ON), or not (OFF). |
| EQ Gain | -12.0–+12.0 dB | Change the amount of equalization (gain). |
| EQ Frequency | 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000Hz | Set Frequency Point. Changes the level of the selected frequency range, with frequency selected here at the center. |

| Parameter | Value | Description |
|-----------|-------|-------------|
| EQ Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Adjusts the "Q" (bandwidth) of equalization. The higher the value, the narrower the range of frequencies that are affected. |

**NOTE**

Depending on the piano Tone selected, this setting may not be available.

## Changing Sound Characteristics (Tone Modify)

You can make changes in tones by adjusting the settings of the elements.

**Decay Time Offset:**

The time it is to take following the attack for the volume to decrease.

**Cutoff Offset:**

Adjusts how much the filter is opened.

**Resonance Offset:**

Emphasizes the overtones in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort

**Release Time Offset:**

The time it takes after the key is released for a sound to become inaudible.

**NOTE**

Making abrupt changes in the settings values may cause the sound to become distorted or overly loud. Carefully monitor volume levels while making the settings.

| Parameter | Value | Description |
|-----------|-------|-------------|
| Decay Time (Offset) | -64–+63 | The time it takes for the volume to fall increases as the value is raised; lowering the value decreases the decay time. |
| Cutoff (Offset) | -64–+63 | Higher values brighten the sound; lower values make the sound seem darker. |
| Resonance (Offset) | -64–+63 | Higher value makes the special quality of the sound stronger; lower value reduce these characteristics. |
| Release Time (Offset) | -64–+63 | Higher values produce longer decay; set lower values for a clear-cut sound |

# Detailed Settings for Each Function ([EDIT])

The process of changing tone parameters to create the tones you like, and changing the settings for various functions is known as "editing."

When [EDIT] is pressed and the indicator is lit, the RD-700SX switches to "Edit mode."

You can save edited settings to Setups.

Edited settings are discarded when the RD-700SX's power is turned off, so be sure that any settings you want to keep are saved to a Setup. For details, refer to **"Storing Settings to Setups ([WRITE])"** (p. 58).

System function (0. System) settings are saved the instant a change is made in any of the parameter values. Therefore, no changes to the settings are lost, even when the power is turned off.

## Parameters That Can Be Set

You can set the following parameters in Edit mode.

| 0.System | Master Tune | p. 27 |
|---|---|---|
| | Master Volume | p. 80 |
| | EQ Mode | p. 80 |
| | Pedal Mode | p. 80 |
| | Tone Remain | p. 81 |
| | Clock Source | p. 81 |
| | Clock Out | p. 81 |
| | SETUP Control Channel | p. 81 |
| | Device ID | p. 81 |
| | USB Driver | p. 106 |
| | Damper Polarity | p. 81 |
| | FC1 Polarity | p. 81 |
| | FC2 Polarity | p. 81 |
| | Display Mode | p. 82 |
| | Part Mode | p. 82 |
| | Temperament | p. 82 |
| | Temperament Key | p. 82 |
| | Stretch Tune | p. 82 |
| | Rx GM/GM2 System ON | p. 82 |
| | Rx GS Reset | p. 82 |
| 1. Key Touch | Key Touch | p. 83 |
| | Key Touch Offset | p. 83 |
| | Velocity | p. 84 |
| | Velocity Delay Sensitivity | p. 84 |
| | Velocity Keyfollow Sensitivity | p. 84 |
| 2. Control | FC1 Pedal Assign | p. 85 |
| | FC2 Pedal Assign | p. 85 |
| | Control Knob Assign | p. 85 |
| | Slider Assign | p. 85 |
| | Harmonic Bar | p. 54 |
| 3. Effects | MFX Structure | p. 86 |
| | MFX1 Source | p. 86 |
| | MFX2 Source | p. 86 |
| | MFX1 Destination | p. 87 |
| | Type | p. 87 |
| | MFX Control | p. 87 |
| | MFX Parameters | p. 87 |
| | Reverb Type | p. 87 |
| | Reverb Parameters | p. 87 |
| | Chorus Type | p. 88 |
| | Output Select | p. 88 |
| | Chorus Parameters | p. 88 |

| 4. Sound Control | Type | p. 89 |
|---|---|---|
| | Split Frequency L | p. 89 |
| | Split Frequency H | p. 89 |
| | Level | p. 89 |
| | Attack Time | p. 89 |
| | Release Time | p. 89 |
| | Threshold | p. 89 |
| | Ratio | p. 89 |
| 5. File Utility/ USB | Save SETUP File | p. 89 |
| | Load SETUP File | p. 90 |
| | File Delete | p. 91 |
| | USB Setting | p. 104 |
| | USB Storage | p. 105 |
| 6. Part Parameter | Part | p. 92 |
| | Tone | p. 92 |
| | Receive Channel | p. 92 |
| | Volume | p. 92 |
| | Pan | p. 92 |
| | Voice Reserve | p. 92 |
| | Part Switch | p. 92 |
| | MFX Switch | p. 92 |
| | Rx Bank Select | p. 92 |
| | Rx Program Change | p. 92 |
| | Rx Modulation | p. 92 |
| | Rx Pitch Bend | p. 92 |
| | Rx Volume | p. 92 |
| | Rx Hold -1 | p. 92 |
| | Rx Pan | p. 92 |
| | Rx Expression | p. 92 |
| 7. Rhythm/ Arpeggio | **Rhythm** | |
| | Rhythm Tempo | p. 93 |
| | Rhythm Volume | p. 93 |
| | Rhythm Pattern | p. 93 |
| | Rhythm Set | p. 94 |
| | Rhythm Set Change | p. 94 |
| | Rhythm Accent | p. 94 |
| | Rhythm/Arpeggio Grid | p. 94 |
| | Rhythm/Arpeggio Duration | p. 94 |
| | MIDI Out Port | p. 94 |
| | MIDI Out Channel | p. 94 |
| | **Arpeggio** | |
| | Arpeggio Tempo | p. 95 |
| | Arpeggio Style | p. 95 |
| | Arpeggio Motif | p. 95 |
| | Arpeggio Zone | p. 96 |
| | Arpeggio Key Range | p. 96 |
| | Arpeggio Velocity | p. 96 |
| | Rhythm/Arpeggio Grid | p. 94 |
| | Rhythm/Arpeggio Duration | p. 94 |
| | Arpeggio Accent | p. 96 |
| | Arpeggio Octave Range | p. 96 |
| | Arpeggio Hold | p. 96 |
| 8. V-Link | V-Link Mode | p. 98 |
| | V-Link Tx Channel | p. 98 |
| | V-Link Out Port | p. 98 |
| | Key Range | p. 98 |
| | Lowest No. | p. 98 |
| | Local ON/OFF | p. 98 |
| 9. Utility | Rec Setting | p. 101 |
| | Bulk Dump Temporary | p. 99 |
| | Bulk Dump SETUP | p. 99 |
| | Factory Reset Current | p. 100 |
| | Factory Reset All | p. 100 |

## Setting Parameters

EDIT

Getting [EDIT] indicator light

Enter the Edit Mode

**Edit Menu Screen**

```
=== EDIT MENU ===
0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
      ▼
```

```
=== EDIT MENU ===
      ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```

CURSOR    Select a menu

SHIFT / EXIT    ENTER

**Edit Screen**

```
EDIT [System]        ▶
Master Tune:  440.0Hz
Master Volume:    120
EQ Mode:        SETUP
Pedal Mode:     SETUP
Tone Remain:       ON
   WRITE
```

CURSOR    Switch screens

CURSOR    Select an item

```
EDIT [System]       ◀▶
Clock Source:     INT
Clock Out:         ON
SETUP Ctrl Ch:    OFF
Device ID:         17
USB Driver:  ORIGINAL
   WRITE
```

:
(The number of Edit screen pages may vary according to the menu selected.)

DEC  INC    Change the value

You can input the value using the TONE SELECT buttons, and press [ENTER] to set the value.

Exit the Edit Mode

EDIT

Extinguishing [EDIT] indicator

**(MEMO)**

You can press [F1(WRITE)] to save following settings as common settings to RD-700SX.

- 0. System
- 4. Sound Control
- 8. V-Link

However, following settings are not saved.

- V-Link On or Off
- Sound Control On or Off

## Making System Settings (System)

Functions that affect the RD-700SX's overall operating environment are called "System functions."

## How to Make Settings

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

```
=== EDIT MENU ===
0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
      ▼
```

2. **Press CURSOR [ ▲ ] to select "0.System."**

3. **Press [ENTER] to display the Edit screen.**

```
EDIT [System]        ▶
Master Tune:  440.0Hz
Master Volume:    120
EQ Mode:        SETUP
Pedal Mode:     SETUP
Tone Remain:       ON
   WRITE
```

```
EDIT [System]       ◀▶
Clock Source:     INT
Clock Out:         ON
SETUP Ctrl Ch:    OFF
Device ID:         17
USB Driver:  ORIGINAL
   WRITE
```

```
EDIT [System]       ◀▶
Damper Polarity: STND
FC1 Polarity:    STND
FC2 Polarity:    STND
Display Mode:  NORMAL
Part Mode:     16PART
   WRITE
```
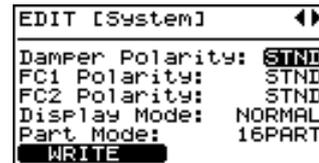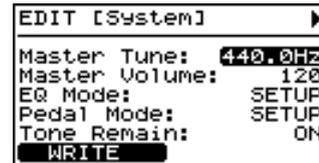
4. **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

5. **Press [INC]/[DEC] to set the value.**

6. **When you have finished making the settings, press [EDIT], extinguishing its indicator.**

**(MEMO)**

If you want to save this settings, press [F1(WRITE)]. Settings saved in the RD-700SX are not deleted even when the power is turned off. However, following settings are not memorized.
Device ID→p. 81

(MEMO)

For more on the following system function parameters, refer to the corresponding pages.

Master Tune →p. 27        USB Driver →p. 106

## Adjusting the Volume (Master Volume)

Adjusts the volume of the entire RD-700SX.

| Parameter | Value |
|---|---|
| Master Volume | 0-127 |

## Preventing Equalizer Settings from Being Switched (EQ Mode)

You can store different equalizer settings (p. 45) for each individual Setup (p. 56).

This setting determines whether or not the Setup equalizer settings values are to be changed when Setups are switched.

| Parameter | Value | Description |
|---|---|---|
| EQ Mode | SETUP | Equalizer settings change when Setups are switched. |
| | SYSTEM | Equalizer settings do not change when Setups are switched. |

(MEMO)

When this is set to SYSTEM, a " EQ " is displayed in the upper right of each screen.

## Preventing Pedal Settings from Being Switched (Pedal Mode)

You can store separate pedal settings (p. 85) for each Setup (p. 56).

This setting determines whether or not the pedal settings are switched to the values stored in the setup you are switching to.

| Parameter | Value | Description |
|---|---|---|
| Pedal Mode | SETUP | Pedal settings change when Setups are switched. |
| | SYSTEM | Pedal settings do not change when Setups are switched. |

(MEMO)

When this is set to SYSTEM, a " PD " is displayed in the upper right of each screen.

## Assigning the Pedal Function When Pedal Mode is Set to "SYSTEM"

When this is set to SYSTEM, "Pedal Setting" appears in the lower right of the screen. Pressing [F2] at this point calls up the screen for the function assigned to the pedal.

| Parameter | Value | Function/Parameter Setting Changed |
|---|---|---|
| FC1 FC2 | OFF | No control |
| | CC01–CC31, CC33–CC95 | Controller Numbers 1–31, 33–95 |
| | 96: BEND-UP | Raises the pitch (up to a maximum of four octaves). |
| | 97: BEND-DOWN | Lowers the pitch (up to a maximum of four octaves). |
| | 98: AFTER TOUCH | After Touch |
| | 99: OCTAVE UP | Each pedal press raises the key range in octave steps (up to 4 octaves higher). |
| | 100: OCTAVE DWN | Each pedal press lowers the key range in octave steps (up to 4 octaves lower). |
| | 101: START/STOP | Starts/Stops the external sequencer. |
| | 102: TAP TEMPO | The tempo will be modified to the interval at which you press the pedal. |
| | 103: RHY PLY/STP | Starts and stops Rhythms (p. 48). |
| | 104: ARPEGGIO SW | Performs the same function as [ARPEGGIO]. Switches the Arpeggio (p. 46) on and off. |
| | 105: MFX ON/OFF | Performs the same function as MULTI EFFECTS [ON/OFF]. Switches the multi-effects (p. 52) on and off. |
| | 106: MFX CONTROL | Adjusting the amount of the multi-effects (p. 52). |
| | 107: SNG PLY/STP | Starts and stops the song (p. 50). |
| | 108: SETUP-UP | Switches the Setups in ascending order. |
| | 109: SETUP-DOWN | Switches the Setups in descending order. |

## Retaining the Current Tone Even When Tones Are Switched (Tone Remain)

This setting specifies whether the currently heard sound will continue (ON) or not (OFF) when another tone is selected.

| Parameter | Value |
|---|---|
| Tone Remain | OFF, ON |

**NOTE**

Effects settings change as soon as you switch to a new Tone, without being influenced by the Tone Remain setting. Because of this, certain effects settings can cause notes that were until then sounding to no longer be heard, even though Tone Remain has been set to ON.

**NOTE**

Even if Tone Remain is set to ON, the sound of the current tone is not carried over when changing from a Virtual Tonewheel tone to a non-Virtual Tonewheel tone.

## Changing the Clock (Timing) Source (Clock Source)

You can control the tempo from an external MIDI device. Set this to MIDI when synchronizing to the clock (tempo) of an external MIDI device.

| Parameter | Value | Description |
|---|---|---|
| Clock Source | INT | Synchronized to the internal clock |
| | MIDI | Synchronized to the external MIDI device's clock. The tempo indication " ♩ : " changes to " M: " for each screen. |

**MEMO**

Internal tempo settings are made in the Tone screen (p. 29), the Rhythm Edit screen (p. 93), the Arpeggio Edit Screen (p. 93), Song/Rhythm/Arpeggio screen (p. 29), and Virtual Tonewheel Screen (p. 29).

**NOTE**

The tempo cannot be set if Clock Source is set to MIDI without there being any external MIDI device connected. This can result in Arpeggios (p. 46) and Rhythms (p. 48) not sounding, and may change the manner in which certain effects are applied.

## Transmitting Synchronization Messages (Clock Out)

This setting determines whether or not the MIDI messages necessary to synchronize the RD-700SX with external devices are to be transmitted from the MIDI OUT connector.

| Parameter | Value |
|---|---|
| Clock Out | ON, OFF |

## Using Program Change Messages to Switch Setups (SETUP Control Channel)

You can switch the RD-700SX's Setups with MIDI messages from an external MIDI device.

Set the MIDI Receive channel for receiving the MIDI messages (Program Changes) from the external MIDI device to be used for switching Setups.

When not switching Setups from an external MIDI device, set this to OFF.

| Parameter | Value |
|---|---|
| Control Channel | 1–16, OFF |

**NOTE**

When the Control Channel settings are transmitted along with the part's MIDI receive channel (p. 92), switching of Setups takes priority over the switching of tones.

For more information about Switching Setups, refer to **"Switching Setups"** (p. 103).

## Setting the Device ID Number (Device ID)

The Device ID number is an identification number used when transmitting and receiving MIDI Exclusive messages. When transmitting Exclusive messages, the device ID numbers of the corresponding devices must be matched.

| Parameter | Value |
|---|---|
| Device ID | 17–32 |

## Switching the Pedal's Polarity (Pedal/FC1/FC2 Polarity)

Switch the polarity of pedals connected to the RD-700SX.

This can be set individually for each of the Pedal jacks on the rear panel (FC1, FC2, DAMPER).

On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to Reverse.

If you are using a Roland pedal (that has no polarity switch), set this parameter to STANDARD.

| Parameter | Value |
|---|---|
| Damper | STND (STANDARD), REV (REVERSE) |
| FC1 | |
| FC2 | |

## Selecting the Display Appearance (Display Mode)

This switches the appearance of the display. When "INVERT" is selected, the blue and white portions of the display are the reverse of what they are when "NORMAL" is selected.

| Parameter | Value |
|---|---|
| Display Mode | NORMAL, INVERT |

## Selecting the Number of Parts (Part Mode)

This selects the number of parts for the RD-700SX.

When set to "16PART+PERF," the performance on the keyboard is not affected by MIDI messages from the MIDI IN connector or song data played by the RD-700SX. This is useful when you want to perform on the keyboard while playing song data with the RD-700SX.

| Parameter | Value |
|---|---|
| Part Mode | 16PART, 16PART+PERF (Performance) |

## Setting the Tuning Method (Temperament/Key)

This sets the tuning and keynote (tonic).

Most modern songs are composed and played with the assumption that equal temperament will be used, but when classical music was composed, there were a wide variety of other tuning systems in existence. Playing a composition with its original tuning lets you enjoy the sonorities of the chords that the composer originally intended.

When playing with tuning other than equal temperament, you need to specify the keynote for tuning the song to be performed (that is, the note that corresponds to C for a major key or to A for a minor key).

If you choose an equal temperament, there's no need to select a keynote.

| Parameter | Value | Description |
|---|---|---|
| Temperament | EQUAL | Equal Temperament. This tuning divides an octave into 12 equal parts. Every interval produces about the same amount of slight dissonance. |
| | JUST MAJ | Just (Major). This scale eliminates dissonance in fifths and thirds. It is unsuited to playing melodies and cannot be transposed, but is capable of beautiful sonorities. |
| Temperament | JUST MIN | Just (Minor). The scales of the major and minor just intonations are different. You can get the same effect with the minor scale as with the major scale. |
| | PYTHAGOREAN | This scale devised by the philosopher Pythagoras eliminates dissonance in fourths and fifths. Dissonance is produced by third-interval chords, but melodies are euphonious. |
| | KIRNBERGER | This scale is a modification of the meantone and just intonations that permits greater freedom in transposition to other keys. Performances are possible in all keys (III). |
| | MEAN TONE | This scale makes some compromises in just intonation, enabling transposition to other keys. |
| | WERCKMEISTER | This is a combination of the mean tone and Pythagorean scales. Performances are possible in all keys (first technique, III). |
| | ARABIC | Arabic Scale. This scale is suitable for Arabic music. |
| Temperament Key | C, C#, D, Eb, E, F, F#, G, G#, A, Bb, B | Sets the keynote. |

## Precise Modification of Chord Sonorities (Stretch Tune)

Changes the pitch using the "stretch tuning" method typically used on acoustic pianos. This makes high-range sounds slightly higher in pitch, and low-range sounds slightly lower in pitch.

| Parameter | Value | Description |
|---|---|---|
| Stretch Tune | OFF | No stretch tune. |
| | DEFAULT | This is the standard tuning curve. |

## Switching Between Reception of GM/GM2 System On and GS Reset

Specifies whether General MIDI System On, General MIDI 2 System On, or GS Reset messages from external MIDI devices will be received (ON) or not (OFF).

| Parameter | Value |
|---|---|
| Rx. GM/GM2 System ON | ON, OFF |
| Rx. GS Reset | |

# Setting the Keyboard Touch (Key Touch)

You can make advanced settings for the touch used for the keys.

## How to Make Settings

**1. Press [EDIT], getting the indicator to light.**

The Edit Menu screen appears.

```
=== EDIT MENU ===
0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
          ▼
```

**2. Press CURSOR [ ▲ ]/[ ▼ ] to select "1.Key Touch."**

**3. Press [ENTER] to display the Edit screen.**

```
EDIT [Key Touch]

Key Touch:      MEDIUM
Key Touch Offset:    0
Velocity:         REAL
Velo Delay Sens:     0
Velo Keyfolw Sens:   0
```

**4. Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

**5. Press [INC]/[DEC] to set the value.**

**6. When you have finished making the settings, press [EDIT], extinguishing its indicator.**

You are returned to the Tone screen.

## Changing the Key Touch (Key Touch)

The setting below allows you to adjust the response you get from the keyboard when you finger the keys.

| Parameter | Value | Description |
|-----------|-------|-------------|
| Key Touch | SUPER LIGHT | An even lighter setting than LIGHT. |
| | LIGHT | This sets the keyboard to a light touch. You can achieve fortissimo (ff) play with a less forceful touch than usual, so the keyboard feels lighter. This setting makes it easy to play, even for children. |
| | MEDIUM | This sets the keyboard to the standard touch. You can play with the most natural touch. This is the closest to the touch of an acoustic piano. |
| | HEAVY | This sets the keyboard to a heavy touch. You have to finger the keyboard more forcefully than usual in order to play fortissimo (ff), so the keyboard touch feels heavier. Dynamic fingering adds even more feeling to what you play. |
| | SUPER HEAVY | An even heavier setting than HEAVY. |

## Making Fine Adjustments to the Keyboard Touch (Key Touch Offset)

This setting provides even more precise adjustment of the key touch than available with the Key Touch setting alone.

This allows you to adjust between Key Touch settings values.

| Parameter | Value | Description |
|-----------|-------|-------------|
| Key Touch Offset | -10– +9 | The touch sensitivity becomes heavier as the value increases. |

**NOTE**

When this settings value continues into the positive or negative direction, the Key Touch's five-step value is switched automatically in accordance with that value.

## Setting a Constant Volume Level in Response to the Playing Force (Velocity)

This sets the sound to play at a fixed volume, regardless of the strength used to play the keyboard (the velocity).

| Parameter | Value | Description |
|-----------|-------|-------------|
| Velocity | REAL | Volume levels and the way sounds are played change in response to the velocity. |
| | 1–127 | Values for the volume and the way sounds are played remain constant. |

## Changing the Timing of Sounds in Response to the Velocity (Velocity Delay Sens)

This sets the interval from the time the key is played to when the sound is produced.

As the value is decreased, the timing of the sound is delayed more when more force is used to play the keys.

As the value is increased, the timing of the sound is delayed more when less force is used to play the keys.

| Parameter | Value |
|-----------|-------|
| Velo Delay Sens | -63–+63 |

## Changing the Touch Sensitivity According to the Key Range (Velocity Keyfollow Sens)

This setting changes the touch sensitivity according to the key range being used.

As the value is increased, the touch becomes heavier in the upper registers, and lighter in the lower keys.

| Parameter | Value |
|-----------|-------|
| Velo Keyfolw Sens | -63–+63 |

# Pedal and MULTI EFFECTS [CONTROL] Knob Settings (Control)

You can change the functions assigned to the pedals, sliders, and MULTI EFFECTS [CONTROL] knob settings.

## How to Make Settings

1.  **Press [EDIT], getting the indicator to light.**
    The Edit Menu screen appears.

    ```
    === EDIT MENU ===
    0.System
    1.Key Touch
    2.Control
    3.Effects
    4.Sound Control
            ▼
    ```

2.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "2.Control/ EQ."**

3.  **Press [ENTER] to display the Edit screen.**
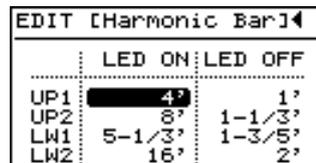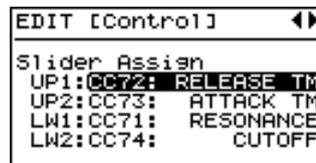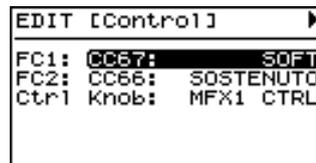
    ```
    EDIT [Control]        ▶
    FC1: CC67:        SOFT
    FC2: CC66:   SOSTENUTO
    Ctrl Knob:   MFX1 CTRL
    ```

    ```
    EDIT [Control]       ◀▶
    Slider Assign
     UP1:CC72: RELEASE TM
     UP2:CC73:   ATTACK TM
     LW1:CC71:   RESONANCE
     LW2:CC74:      CUTOFF
    ```

    ```
    EDIT [Harmonic Bar]◀
          │ LED ON│LED OFF
    UP1│     4'│     1'
    UP2│     8'│ 1-1/3'
    LW1│ 5-1/3'│ 1-3/5'
    LW2│    16'│     2'
    ```

4.  **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

5.  **Press [INC]/[DEC] to set the value.**

6.  **When you have finished making the settings, press [EDIT], extinguishing its indicator.**
    You are returned to the Tone screen.

    **(MEMO)**

    For more on the following parameters, refer to the corresponding pages.
    Harmonic Bar →p. 54

## Assigning Functions to Pedals (FC1/FC2 Pedal Assign)

This setting determines the function of the pedal switches or expression pedals (such as the optional EV series) that are connected to the FC1 and FC2 jacks on the rear panel.

| Parameter | Value | Function/Parameter Setting Changed |
|---|---|---|
| FC1/FC2 (Pedal Assign) | OFF | No control |
| | CC01–CC31, CC33–CC95 | Controller Numbers 1–31, 33–95 |
| | 96: BEND-UP | Raises the pitch (up to a maximum of four octaves). |
| | 97: BEND-DWN | Lowers the pitch (up to a maximum of four octaves). |
| | 98: AFTER TOUCH | After Touch |
| | 99: OCT-UP | Each pedal press raises the key range in octave steps (up to 4 octaves higher). |
| | 100: OCT-DOWN | Each pedal press lowers the key range in octave steps (up to 4 octaves lower). |
| | 101: START/STOP | Starts/Stops the external sequencer. |
| | 102: TAP-TEMPO | The tempo will be modified to the interval at which you press the pedal. |
| | 103: RHY PLY/STP | Starts and stops Rhythms (p. 48). |
| | 104: ARPEGGIO SW | Performs the same function as [ARPEGGIO]. Switches the Arpeggio (p. 46) on and off. |
| | 105: MFX ON/OFF | Performs the same function as MULTI EFFECTS [ON/OFF]. Switches the multi-effects (p. 52) on and off. |
| | 106: MFX CONTROL | Adjusts the amount of multi-effects (p. 52). |
| | 107: SNG PLY/STP | Starts/Stops the song (p. 50). |

## Changing the MULTI EFFECTS [CONTROL] Knob Settings (Control Knob Assign)

Normally, MULTI EFECTS [CONTROL] knob is used for making settings that adjust the multi-effects (MFX1 Control), but they can also be used for settings that change the way tones are played or the tempo.

| Parameter | Value | Description |
|---|---|---|
| Ctrl Knob (Control Knob Assign) | OFF | No control |
| | MFX1 CTRL | MULTI EFFECTS [CONTROL] knob adjusts the MFX Control of MFX1 applied. |
| | MFX2 CTRL | MULTI EFFECTS [CONTROL] knob adjusts the MFX Control of MFX2 applied. |
| | MFX1 &2 CTRL | MULTI EFFECTS [CONTROL] knob adjusts the MFX Control of MFX1 and MFX2 applied. |
| | TEMPO | MULTI EFFECTS [CONTROL] knob changes the tempo. |

## Changing the Slider Settings (Slider Assign)

This sets the function of the slider when [CONTROL/ZONE LEVEL] is set to "CONTROL" (lit).

| Parameter | Value | Description |
|---|---|---|
| Slider Assign (UP1/UP2/LW1/LW2) | OFF | No control |
| | CC01–CC31, CC33–CC95 | Controller Numbers 1-31, 33-95 |
| | 96: BEND-UP | Raises the pitch in semitone units (up to a maximum of four octaves). |
| | 97: BEND-DOWN | Lowers the pitch in semitone units (up to a maximum of four octaves). |
| | 98: AFTER TOUCH | After Touch |

# Setting the Multi-Effects, Reverb, and Chorus Effects (Effects)

The RD-700SX contains four effects processors: two multi-effects, chorus, and reverb. Settings can be made separately for each effects processor.

**NOTE**

Making abrupt changes in the settings values may cause the sound to become distorted or overly loud. Carefully monitor volume levels while making the settings.

## How to Make Settings

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

```
=== EDIT MENU ===
0.System
1.Key Touch
2.Control
3.Effects
4.Sound Control
        ▼
```

2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "3.Effects."**

3. **Press [ENTER] to display the Edit screen.**
   Press [F2] to switch between MFX1 and MFX2.
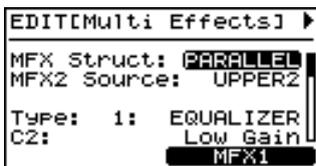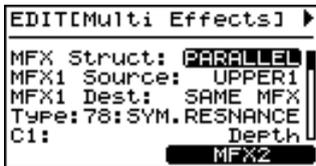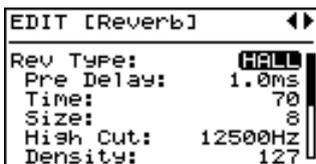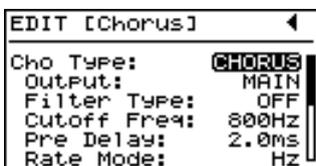
```
EDIT[Multi Effects] ▶
MFX Struct: PARALLEL
MFX1 Source:   UPPER1
MFX1 Dest:   SAME MFX
Type:78:SYM.RESNANCE
C1:            Depth
           MFX2
```

```
EDIT[Multi Effects] ▶
MFX Struct: PARALLEL
MFX2 Source:   UPPER2

Type:  1:  EQUALIZER
C2:          Low Gain
           MFX1
```

**"REVERB" Settings Screen**

```
EDIT [Reverb]        ◀▶
Rev Type:        HALL
 Pre Delay:     1.0ms
 Time:            70
 Size:             8
 High Cut:    12500Hz
 Density:        127
```

**"CHORUS" Settings Screen**

```
EDIT [Chorus]         ◀
Cho Type:       CHORUS
 Output:         MAIN
 Filter Type:    OFF
 Cutoff Freq:  800Hz
 Pre Delay:    2.0ms
 Rate Mode:      Hz
```

4. **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

5. **Press [INC]/[DEC] to set the value.**

6. **When you have finished making the settings, press [EDIT], extinguishing its indicator.**
   You are returned to the Tone screen.

## Making Multi-Effects Settings

The Multi-effects are multi-purpose effects that completely change the sound type by changing the sound itself. Contained are 125 different effects types; select and use the type that suits your aims. In addition to effects types composed of simple effects such as Distortion, Flanger, and other such effects, you can also set up a wide variety of other effects, even connecting effects in series or in parallel. Additionally, while some multi-effects types feature chorus and reverb, the reverb (p. 43) and chorus (p. 43) effects discussed later in this volume are handled separately.

### MFX Structure

This setting determines how MFX1 and MFX2 are connected.

| Parameter | Value | Description |
|---|---|---|
| MFX Structure | PARALEL | The effects are connected in parallel. |
| | SERIAL | The effects are connected serially. |

### MFX Source

On the RD-700SX, the MFX Type can be stored along with the tones assigned to each part.

This settings determine which multi-effects are used.

| Parameter | Value | Description |
|---|---|---|
| MFX1/2 Source | FIXED ("OFF" at MFX2 Source) | The multi-effect doesn't change even when you switch to a different tone. This setting is convenient when you want to use the same multi-effect, even when changing tones. |
| | UPPER1, UPPER2, LOWER, RHYTHM | The MFX Type of the Tone assigned to the selected part is applied. |

**NOTE**

When MFX Source is set to FIXED, the MFX Dest setting is fixed at ALL PART, and the multi-effects are applied to all parts.

## MFX Dest

This settings determine the part to which the MFX1 are applied.

| Parameter | Value | Description |
|---|---|---|
| MFX Dest (Destination) | SOURCE PART | The multi-effect is applied only to the part selected in MFX1 Source. |
| | SAME MFX | The multi-effect is applied to parts assigned the same multi-effect as the part selected in MFX1 Source. |
| | ALL PART | The multi-effects are applied to all parts. |

## Type

Select the Multi-Effects Type.

There are 125 different multi-effects available. Refer to the Effect/Parameter List (p. 112).

| Parameter | Value |
|---|---|
| Type | Refer to **"Effect/Parameter List"** (p. 112). |

**NOTE**

When MFX Source is set to UPPER1, UPPER2, LOWER1, or LOWER2, the Tone Info MFX Type settings (p. 71) also change.

## MFX Control

You can make changes to the multi-effect parameters in real time with the MULTI EFFECTS [CONTROL] knob. Here, select the parameter to be changed.

The parameters that can be changed vary with the different multi-effects selected in Type.

The available choices depend on the Type setting.

| Parameter | Value |
|---|---|
| C1/2 (MFX Control) | Refer to **"Effect/Parameter List"** (p. 112). |

## Other Multi-effects Settings

You can make even more detailed settings to the multi-effects. When you select the multi-effects Type, a number of parameters particular to that type are displayed. Refer to the **"Effect/Parameter List"** (p. 112) for the values that can be set.

**NOTE**

Multi-effects are not applied to parts in which the Part Parameter MFX Switch is set to "OFF."

**MEMO**

With some types of multi-effects, lowering the volume of the Part to which the multi-effects are added may end up changing the amount of the effect applied. In such cases, adjust the Level in MFX parameters.

**NOTE**

Use caution before setting the Feedback parameter to its maximum or minimum values, since such settings may cause the sound to play continuously.

## Making Reverb Settings

Reverb adds the reverberation characteristics of halls or auditoriums. Six different types are offered, so you can select and use the type that suits your purpose.

**MEMO**

You can set the amount of reverb applied separately for each individual tone (p. 71).

## Reverb Type

Select the reverb type.

When you change the Reverb Type, the Reverb parameters will be automatically adjusted to the optimal values. Rather than setting the reverb parameters one by one, you can make the settings more easily by first setting the Reverb Type and then changing only the necessary parameters.

The way the [REVERB] indicators light changes with the selected type.

| Parameter | Value | Description |
|---|---|---|
| Reverb Type | OFF | No reverb is used. The indicator does not light. |
| | REVERB | Normal Reverb. The "HALL" indicator flashes. |
| | ROOM | Simulates the reverberation of room interiors. It produces a well-defined and spacious reverberation. The "ROOM" indicator remains lit. |
| | HALL | Simulates the reverberation exhibited by hall. It provides a deeper reverberation than the Room reverbs. The "HALL" indicator remains lit. |
| | PLATE | Simulates a plate reverb unit (a type of artificial reverb that utilized a metal plate). The "ROOM" indicator flashes. |
| | GM2 REVERB | This is a GM2 reverb. The "CATHEDRAL" indicator flashes. |
| | CATHEDRAL | This reproduces the reverb found in a church cathedral. The "CATHEDRAL" indicator remains lit. |

## Other Reverb Settings

You can make even more detailed reverb settings.

When you select a Reverb Type, a number of parameters unique to that type are displayed. Refer to p. 145 for the values that can be set.

## Setting Chorus and Delay

Chorus adds depth and spaciousness to the sound. You can select whether to use this as a chorus effect or a delay effect.

**(MEMO)**

> You can set the amount of Chorus applied separately for each individual tone (p. 71).

## Chorus Type

You can select the chorus type.

When you change the Chorus Type, the Chorus parameters will be automatically adjusted to the optimal values. Rather than setting the chorus parameters one by one, you can make the settings more easily by first setting the Chorus Type and then changing only the necessary parameters.

The way the [CHORUS/DELAY] indicators light changes with the selected type.

| Parameter | Value | Description |
|---|---|---|
| Chorus Type | OFF | Chorus or Delay is not used. The indicator does not light. |
| | CHORUS | Normal Chorus. The "CHORUS" indicator remains lit. |
| | DELAY | Normal Delay. The "DELAY" indicator remains lit. |
| | GM2 CHORUS | This is a GM2 reverb. The "CHORUS" indicator flashes. |

## Selecting the Output Destination (OUT PUT SELECT)

This selects the output mode for the chorus sound.

| Parameter | Value | Description |
|---|---|---|
| Output SELECT | MAIN | The chorus sound is output without being passed through the reverb. The chorus sound without the reverb applied to it is mixed with the reverb sound. |
| | REVERB | The chorus sound is output with reverb applied to it. |
| | MAIN+ REVERB | The chorus sound without the reverb applied to it is mixed with the chorus sound to which reverb has been applied. |

## Other Chorus Settings

You can make even more detailed chorus/delay settings.

When you select a Chorus Type, a number of parameters unique to that type are displayed. Refer to p. 144 for the values that can be set.

# Making the Sound Control Settings (Sound Control)

This is a stereo compressor (limiter) that is applied to the final output.

With separate settings for the high-frequency range, midrange, and low-frequency range, this reduces inconsistencies in volume levels by compressing the sound when the volume exceeds a preset volume level.

## How to Make Settings

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

   ```
   === EDIT MENU ===
   0.System
   1.Key Touch
   2.Control
   3.Effects
   4.Sound Control
         ▼
   ```

2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "4.Sound Control."**

3. **Press [ENTER] to display the Edit screen.**

   ```
   EDIT[Multi Effects] ▶
   MFX Struct: PARALLEL
   MFX1 Source:  UPPER1
   MFX1 Dest:  SAME MFX
   Type:78:SYM.RESNANCE
   C1:          Depth
               MFX2
   ```

   ```
   EDIT[Multi Effects] ▶
   MFX Struct: PARALLEL
   MFX2 Source:  UPPER2

   Type:  1:  EQUALIZER
   C2:       Low Gain
               MFX1
   ```
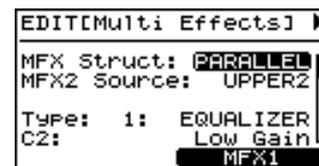
4. **Press CURSOR [ ▲ ] to select "Type."**

5. **Press [INC]/[DEC] to set the type of compressor.**

6. **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**
   With certain parameters, pressing [F2 (L-M-H)] selects the low-frequency range, midrange, or high-frequency range.

7. **Press [INC]/[DEC] to set the value.**

8. **If you want to save this settings, press [F1(WRITE)].**
   The settings are written to Sound Control Type "USER."

9. **When you have finished making the settings, press [EDIT], extinguishing its indicator.**
   You are returned to the Tone screen.

**(MEMO)**

Settings saved in the RD-700SX are not deleted even when the power is turned off.

## Selecting the Type of Compressor (Sound Control Type)

When you change the this parameter, the Sound Control parameters will be automatically adjusted to the optimal values. You can make the settings easily by first setting the Sound Control Type and then changing only the necessary parameters.

| Parameter | Value | Description |
|---|---|---|
| Type (Sound Control Type) | HARD COMP | Applies strong compression. |
| | SOFT COMP | Applies mild compression. |
| | LOW BOOST | Boosts the low end. |
| | MID BOOST | Boosts the midrange. |
| | HI BOOST | Boosts the high end. |
| | USER | The saved settings are written. |

## Detailed Settings of Compressor

| Parameter | Value | Description |
|---|---|---|
| **Split Freq L** | 200, 250, 315, 400, 500, 630, 800 [Hz] | This sets the frequency separating the low-frequency range (Lo) and midrange (MID). |
| **Split Freq H** | 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | This sets the frequency separating the high-frequency range (HI) and midrange (MID). |
| **Level** | 0–24dB (1dB/1Step) | Output Level |
| **Attack Time** | 0–100ms | This sets the time it takes until the level is compressed after the input exceeds the THRESHOLD. |
| **Release Time** | 50–5000ms | This sets the time it takes for the compression to be released after the input falls below the THRESHOLD. |
| **Threshold** | -36dB–0dB (1dB/1step) | This sets the level at which compression begins. |
| **Ratio** | 1:1.0, 1:1.1, 1:1.2. 1:1.4, 1:1.6, 1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0, 1:5.6, 1:8.0, 1:16, 1:INF | Compression Ratio |

## Managing Setup Files (File Utility/USB)

The RD-700SX features a memory in which you can save the RD-700SX's Setup settings. You can also connect a computer using a USB cable to save files to the computer and to load files from the computer to the RD-700SX.

**(MEMO)**

For more on using USB in managing setup files, refer to **"Connecting to Your Computer via USB (USB Mode)"** (p. 104).

## Saving Setup Files to the Memory (Save SETUP File)

A single, individual file containing a collection of 100 setups registered to the RD-700SX is called a "setup file." You can save these setup files to the RD-700SX's memory.

**(MEMO)**

The Setup files you've saved in memory can be transferred to a computer that's been connected using a USB cable and stored there (p. 105).

**(MEMO)**

If you want to save the changed settings of a system parameter, memorize settings by pressing [F1 (WRITE)], then save an setup file.

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.
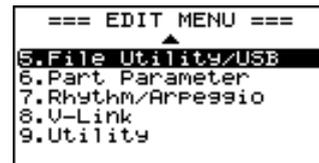
```
=== EDIT MENU ===
          ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```

2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "5.File Utility/ USB," then press [ENTER].**
   The Edit screen appears.

```
EDIT [File Utl/USB]

0.Save SETUP File
1.Load SETUP File
2.File Delete
3.USB Setting
4.USB Storage
```

3. **Press CURSOR [ ▲ ]/[ ▼ ] to select "0. SAVE SETUP File," then press [ENTER].**
   The following screen appears.

# Detailed Settings for Each Function ([EDIT])

```
EDIT[Save SETUP File]

 [SETUP File      ]

   DELETE     INSERT
```

4. **Press CURSOR [ ◀ ]/[ ▶ ] to move the cursor to the positions where the characters are to be input.**

5. **Press [INC]/[DEC] to enter the characters.**
   Names can consist of up to 16 characters.
   The following characters are available.
   **space ! # $ % & ' ( ) + , - . 0–9 ; = @ A–Z [ ] ^ _ ` a–z { } ~**
   When [F2] is pressed, a single-character blank space is inserted; pressing [F1] deletes one character.

6. **Repeat steps 4–5 to input the name.**

7. **When you have finished determining the name for the new Setup file, press [ENTER].**
   The setup files are saved in memory.

   **NOTE**
   "Saving..." appears in the display while the save is in progress.
   **Be sure never to turn off the power.**

   **(MEMO)**
   If a file with the same name has already been saved, the confirmation message "Overwrite OK?" appears. To overwrite the file, press [ENTER]; to save the file under a different name, press [EXIT].

8. **Press [EDIT], extinguishing its indicator.**
   You are returned to the Tone screen.

## Calling Up Setup Files from Memory (Load SETUP File)

Use this procedure to call up setup files that have been saved in memory.

   **NOTE**
   **The current settings are erased when a setup file is called up. Be sure to save you would like to keep first before calling up.**

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

```
=== EDIT MENU ===
         ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```

2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "5.File Utility/USB," then press [ENTER].**
   The Edit screen appears.

```
EDIT [File Utl/USB]

0.Save SETUP File
1.Load SETUP File
2.File Delete
3.USB Setting
4.USB Storage
```

3. **Press CURSOR [ ▲ ]/[ ▼ ] to select "1. Load SETUP File," then press [ENTER].**
   The following screen appears.

```
EDIT[Load SETUP File]

New Year Live
Summer Live
Home Party
Recording Studio
           System
```

4. **When loading System parameter settings, press [F2 (System)] to check in the check box.**

   **(MEMO)**
   System Parameter is following settings.
   - System settings (p. 79)
   - Sound Control Settings (p. 88)
   - V-Link Settings (p. 97)
   - Favorite Setup Settings (p. 57)
   - ONE TOUCH [PIANO] and [E.PIANO] Settings (p. 73)

   **(MEMO)**
   The system parameter is memorized by only the setup file saved after pressing [F1 (WRITE)] to memorize a setup to RD-700SX.

5. **Use CURSOR [ ▲ ]/[ ▼ ] to select the file you want to call up, then press [ENTER].**
   The confirmation message appears.

```
EDIT[Load SETUP File]

   Are You Sure?

  [EXIT]/[ENTER]
           System
```

   If you do not want to load the Setup file, press [EXIT].

6. **Press [ENTER] once again to load the setup file.**
   The file is loaded into the RD-700SX.

   **NOTE**
   **Be sure never to turn off the power while the load is in progress.**

   **(MEMO)**
   If you load a file with a name that contains characters that cannot be displayed by the RD-700SX, the file name is displayed as "?."

7. **Press [EDIT], extinguishing its indicator.**
   You are returned to the Tone screen.

## Deleting Files from Memory (File Delete)

This procedure deletes Setup files and song data loaded from computers that have been saved in memory.

**1. Press [EDIT], getting the indicator to light.**
The Edit Menu screen appears.

```
=== EDIT MENU ===
        ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```

**2. Press CURSOR [ ▲ ]/[ ▼ ] to select "5.File Utility/ USB," then press [ENTER].**
The Edit screen appears.

```
EDIT [File Utl/USB]

0.Save SETUP File
1.Load SETUP File
2.File Delete
3.USB Setting
4.USB Storage
```

**3. Press CURSOR [ ▲ ]/[ ▼ ] to select "2. File Delete," then press [ENTER].**
The following screen appears.

```
EDIT [File Delete]
   ─── ALL FILES ───
 ALL
 New Year Live.RDS
 Summer Live.RDS
 PianoBacking1.MID

 [ DELETE ] [ FILE TYPE ]
```
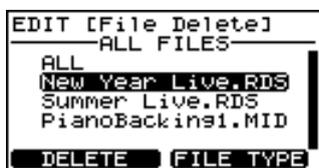
**4. Press [F2] to select the type of file to be deleted.**
The file type switches each time [F2] is pressed.

| Parameter | Value |
|-----------|-----------|
| File Type | ALL FILES |
|           | SETUP     |
|           | SMF       |

**5. Use CURSOR [ ▲ ]/[ ▼ ] to select the file you want to delete.**

**6. Press [F1 (DELETE)].**
The confirmation message appears.

```
EDIT [File Delete]

   Are You Sure?

   [EXIT]/[ENTER]

 [ DELETE ] [ FILE TYPE ]
```
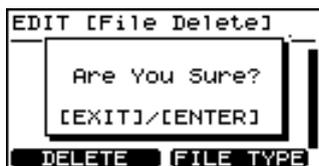
If you do not want to delete the file, press [EXIT].

**7. Press [ENTER] to delete the file.**

**8. Press [EDIT], extinguishing its indicator.**
You are returned to the Tone screen.

## Setting MIDI Receive Parts (Part Parameter)

The sixteen Parts played by the RD-700SX's internal sound generator are referred to as "Internal Parts."

When connecting an external MIDI device to a sequencer or other device, by assigning the Receive channel to an Internal Part you can receive MIDI messages from the external MIDI device and control the Internal Parts.

These parameters determine how each Part will receive MIDI messages.

## How to Make Settings

**1. Press [EDIT], getting the indicator to light.**
The Edit Menu screen appears.

```
=== EDIT MENU ===
        ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```
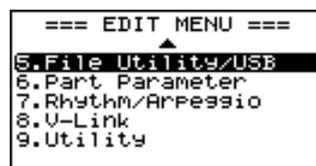
**2. Press CURSOR [ ▲ ]/[ ▼ ] to select "6. Part Parameter."**

**3. Press [ENTER] to display the Edit screen.**
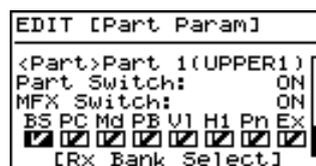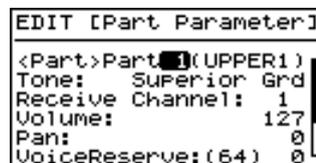
```
EDIT [Part Parameter]

<Part>Part 1(UPPER1)
Tone:    Superior Grd
Receive Channel:    1
Volume:           127
Pan:                0
VoiceReserve:(64)   0
```

```
EDIT [Part Param]

<Part>Part 1(UPPER1)
Part Switch:     ON
MFX Switch:      ON
BS PC Md PB V1 H1 Pn Ex
☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑
   [Rx Bank Select]
```

**4. Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

**5. Press [INC]/[DEC] to set the value.**

**6. When you have finished making the settings, press [EDIT], extinguishing its indicator.**
You are returned to the Tone screen.

## Selecting the Part to Be Set (Part/Tone)

Choose the Part for which you want to make settings.

| Parameter | Value |
|-----------|-------|
| Part | 1-16<br>Parts assigned to the INTERNAL Zone are indicated by a marker (UPPER1) appearing after the part name. |
| Tone | When the Part to be set is selected, the name of the assigned tone appears.<br>You can select tone using the TONE SELECT buttons.<br>For more on the Tone, refer to **"Tone List"** (p. 146) |

## Setting the Receive Channel (Receive Channel)

When using MIDI messages from an external MIDI device to play the RD-700SX, set the Receive channels for each of the RD-700SX's parts so they're matched up with the channels that'll be used for transmission by the external MIDI device.

| Parameter | Value |
|-----------|-------|
| Receive Channel | 1–16 |

## Setting the Volume and Pan (Volume/Pan)

Sets the volume and the panning (localizes sound image) for each of the Tones.

The Volume setting is mainly used when multiple tones are playing to obtain the desired balance in volume between each part.

The Pan setting localizes the sound image of each part when the output is in stereo. With an increase in the value for L, more of the sound will be heard as coming from the left side. Similarly, more of the sound will originate at the right if the value of R is increased. When set to 0, the sound is heard as coming from the center.

| Parameter | Value |
|-----------|-------|
| Volume | 0–127 |
| Pan | L64–0–63R |

## Setting the Required Polyphony (Voice Reserve)

The RD-700SX has a maximum polyphony (the number of sounds, or "voices" that can be produced simultaneously by the sound generator) of 128 voices.

This setting specifies the number of voices that will be reserved for each Part when more than 128 voices are played simultaneously. For example if Voice Reserve is set to 6 for Part 1, Part 1 will always have 6 notes of sound-producing capacity available to it even if a total of more than 128 notes (total for all Parts) are being requested.

You can make separate Voice Reserve settings for each individual Part.

| Parameter | Value |
|-----------|-------|
| Voice Reserve | 0–64<br>* The figure in parentheses before the settings value shows the remaining number of voices that can be set. It is not possible for the settings of all Parts to total an amount greater than 64. |

## Preventing Parts from Being Played (Part Switch)

Sets the part on or off.

| Parameter | Value |
|-----------|-------|
| Part Switch | ON, OFF |

## Making the Effect ON/OFF Settings (MFX Switch)

This setting determines whether the multi-effects are applied (ON), or not (OFF).

For example, with the MFX Dest setting (p. 87) set to "ALL" (multi-effects are applied to all parts), multi-effects are not applied to the parts for which this is set to "OFF."

| Parameter | Value |
|-----------|-------|
| MFX Switch | OFF, ON |

## Setting Reception and Blocking of MIDI Messages from External MIDI Controllers

You can change the RD-700SX's tones by reception of MIDI messages generated through the actions of modulation levers, pedals, knobs, and other such external MIDI devices controls.

You can set whether to have the following MIDI messages received (ON), or not (OFF) individually in each part.

| Parameter | Description | Value |
|-----------|-------------|-------|
| BS | Rx.Bank Select | ON, OFF |
| PC | Rx.Program Change | |
| Md | Rx.Modulation | |
| PB | Rx.Pitch Bend | |
| Vl | Rx.Volume | |
| H1 | Rx.Hold-1 | |
| Pn | Rx.Pan | |
| Ex | Rx.Expression | |

# Making the Rhythm and Arpeggio Settings (Rhythm/Arpeggio)

## How to Make Settings

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

   ```
   === EDIT MENU ===
           ▲
   5.File Utility/USB
   6.Part Parameter
   7.Rhythm/Arpeggio
   8.V-Link
   9.Utility
   ```

2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "7.Rhythm/ Arpeggio."**

3. **Press [ENTER] to display the Edit screen.**

   ```
   EDIT [Rhythm]          ▶
   Tempo:            ♩:120
   Volume:              100
   Patrn:        R&B Pop 1
   Rhy Set:SX Pop Kit
   Rhy Set Change:     ON
   Rhy Accent:        100%
   ```
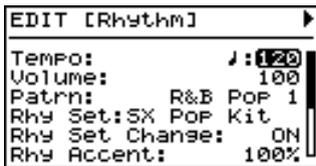
4. **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens.**

5. **Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

6. **Press [INC]/[DEC] to set the value.**

7. **When you have finished making the settings, press [EDIT], extinguishing its indicator.**
   You are returned to the Tone screen.

## Making the rhythm Settings

The RD-700SX features internal drum patterns complementing Jazz, Rock, and other various musical genres. This kind of drum pattern is called a "Rhythm."

> **(MEMO)**
> For more about switching Rhythms on and off, refer to **"Playing Rhythm ([RHYTHM/SONG])"** (p. 48).

### Adjusting the Tempo (Tempo)

Specify the tempo of the Rhythm.

> **NOTE**
> The RD-700SX has only one tempo setting. Once you change the setting, the tempo indicated in the Tone screen and the tempo setting for the arpeggiator (p. 47) both change.

| Parameter | Value |
|-----------|-------|
| Tempo | 10–250 |

> **(MEMO)**
> The way Rhythm is played and the tempo display may differ with some Rhythm Patterns.

> **(MEMO)**
> With Clock Source (p. 81) set to MIDI, "M:" appears in the display, and the RD-700SX is synchronized to the tempo of the external MIDI device. The tempo cannot be changed with the RD-700SX when "M:" is indicated.

### Adjusting the Volume (Rhythm Volume)

Adjusts the volume of the rhythm.

| Parameter | Value |
|-----------|-------|
| Volume | 0–127 |

### Changing Patterns (Rhythm Pattern)

This selects the rhythm pattern. Select from 185 options.

| Parameter | Value |
|-----------|-------|
| Patrn | Refer to **"Rhythm Pattern List"** (p. 153). |

> **(MEMO)**
> You can also change a rhythm's pattern in the **"Song/Rhythm/ Arpeggio screen"** (p. 49).

## Changing the Drum Set (Rhythm Set)

You can change a rhythm's drum set (set of drum and percussion tones).

| Parameter | Value |
|---|---|
| Rhy Set | Refer to **"Rhythm Set List"** (p. 149). |

**(MEMO)**

You can select Tones other than Rhythm Sets.

**(MEMO)**

When this setting is changed, the Part 10 Tone also changes. In addition, Rhythm Set Change is set to OFF.

**NOTE**

Depending on the Rhythm Set that is selected, the Rhythm Set may not play back properly.

## Changing the Pattern Without Changing the Drum Set (Rhythm Set Change)

Each Rhythm in a rhythm pattern has the most suitable drum set assigned to it. When rhythm patterns are changed, the drum sets also switch, so the tone is changed, but here the drum set stays constant and does not change.

| Parameter | Value | Description |
|---|---|---|
| Rhy Set Change | ON | When the Rhythm is changed, the drum set also changes. |
| | OFF | When the Rhythm is changed, the drum set does not change. |

## Changing the Accent Strength (Rhythm Accent)

Modifies the strength of accents and the length of the notes to adjust the "groove" feel of the arpeggio. A setting of 100% will produce the most pronounced groove feel.

| Parameter | Value |
|---|---|
| Rhy Accent | 0–100% |

## Changing the Beat Syncopation (Rhythm/Arpeggio Grid)

This sets the minimum value of the notes comprising rhythms and arpeggios and adjusts the amount of swing (None/Weak/Strong).

**NOTE**

This setting is shared by the Arpeggiator settings.

| Parameter | Value | Description |
|---|---|---|
| Rhy/Arp Grid | 1/4: | Quarter note (one grid section = one beat) |
| | 1/8: | Eighth note (two grid sections = one beat) |
| | 1/8L: | Eighth note shuffle Light (two grid sections = one beat, with a light shuffle) |

| Parameter | Value | Description |
|---|---|---|
| Rhy/Arp Grid | 1/8H: | Eighth note shuffle Heavy (two grid sections = one beat, with a heavy shuffle) |
| | 1/12: | Eighth note triplet (three grid sections = one beat) |
| | 1/16: | Sixteenth note (four grid sections = one beat) |
| | 1/16L: | Sixteenth note shuffle Light (four grid sections = one beat, with a light shuffle) |
| | 1/16H: | Sixteenth note shuffle Heavy (four grid sections = one beat, with a heavy shuffle) |
| | 1/24: | Sixteenth note triplet (six grid sections = one beat) |

## Making the Sound More Staccato or Legato (Rhythm/Arpeggio Duration)

This sets the duration of the sound. You can make it more staccato (short and clipped), or legato, so notes are played longer.

**NOTE**

This setting is shared by the Arpeggiator settings.

| Parameter | Value | Description |
|---|---|---|
| Rhy/Arp Duration | 30, 40, 50, 60, 70, 80, 90, 100, 120 (%) | For example, when set to "30," the length of the note in a grid (or when a series of grids is connected with ties, the final grid) is 30% of the full length of the note set in the grid type. |
| | Full | Even if the linked grid is not connected with a tie, the same note continues to sound until the point at which the next new sound is specified. |

## Selecting the MIDI Output Connector (Rhythm MIDI Out Port)

This sets the MIDI connector (port) from which the rhythm part is to be output.

**NOTE**

Changing this setting also changes the song's MIDI output settings.

| Parameter | Value |
|---|---|
| MIDI Out Port | ALL, INT (INTERNAL), 1 (MIDI OUT 1), 2 (MIDI OUT 2), USB |

## Selecting the MIDI Output Channel (Rhythm MIDI Out Channel)

This sets the channel used for outputting rhythm parts as MIDI output.

| Parameter | Value |
|---|---|
| MIDI Out Channel | OFF, 1–16 |

## Making Arpeggio Settings

The function that allows you to perform arpeggios (chords whose notes are played sequentially rather than together) from a chord's constituent notes, just by playing the chord, is called "Arpeggiator." You can make more detailed arpeggio settings, including tempo and range.

```
EDIT [Arpeggio]      ◀
Tempo:          ♩:120
Style:       Phrase  1
Motif:         PHRASE
Arp Zone:         ALL
Key Range:    A 0-B 3
Arp Velocity:    REAL
```
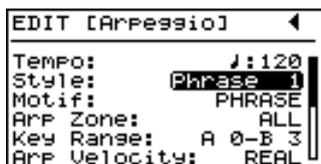
**(MEMO)**

For more on switching the Arpeggiator on and off, refer to **"Playing Arpeggios ([ARPEGGIO])"** (p. 46).

### Adjusting the Tempo (Arpeggio Tempo)

This sets the speed of the arpeggio.

**NOTE**

The RD-700SX has one tempo setting. You can change this setting in the tempo display in the Tone screen; or alternatively, you can change the rhythm's tempo setting (p. 49).

| Parameter | Value |
|---|---|
| Tempo | 10–250 |

**(MEMO)**

The way Arpeggio is played and the tempo display may differ with some Arpeggio Styles.

**(MEMO)**

With Clock Source (p. 81) set to MIDI, "M:" appears in the display, and the RD-700SX is synchronized to the tempo of the external MIDI device. The tempo cannot be changed with the RD-700SX when "M:" is indicated.

### Setting the Way Arpeggios are Played (Arpeggio Style)

This sets the style of the arpeggio.

| Parameter | Value |
|---|---|
| Style | **"Arpeggio Style List"** (p. 152) |

### Changing the Order in Which Notes Are Played (Arpeggio Motif)

Set the order to play the notes for the keys pressed from the following.

| Param | Value | Description |
|---|---|---|
| Motif | UP (L) | The notes are played one by one in sequence from the lowest of the pressed keys. The note for the lowest pressed key is sounded each time. |
| | UP (L&H) | The notes are played one by one in sequence from the lowest of the pressed keys. The notes for both the lowest and highest pressed keys are sounded each time. |
| | UP (_) | The notes are played one by one in sequence from the lowest of the pressed keys. No one note is played every time. |
| | DOWN (L) | The notes are played one by one in sequence from the highest of the pressed keys. The note for the lowest pressed key is sounded each time. |
| | DOWN (L&H) | The notes are played one by one in sequence from the highest of the pressed keys. The notes for both the lowest and highest pressed keys are sounded each time. |
| | DOWN (_) | The notes are played one by one in sequence from the highest of the pressed keys. No one note is played every time. |
| | UP&DOWN (L) | The notes are played one by one in sequence from the lowest of the pressed keys to the highest, and then back again in the reverse order. The note for the lowest pressed key is sounded each time. |
| | UP&DOWN (L&H) | The notes are played one by one in sequence from the lowest of the pressed keys to the highest, and then back again in the reverse order. The notes for the lowest and highest pressed keys are sounded each time. |
| | UP&DOWN (_) | The notes are played one by one in sequence from the lowest of the pressed keys to the highest, and then back again in the reverse order. No one note is played every time. |
| | RANDOM (L) | The notes are played one by one in random order. The note for the lowest pressed key is sounded each time. |
| | RANDOM (_) | The notes are played one by one in random order. No one note is played every time. |
| | PHRASE | A phrase based on the pitch of the lowest pressed key is played. If more than one key is pressed, the pitch of the key that is pressed last is used. |

**NOTE**

Depending on the Arpeggio Style selected, it is not so effective as it expected.

## Selecting the Zone for the Arpeggio Performance (Arpeggio Zone)

This sets the zone to be used for the arpeggio performance when multiple tones are used (p. 37).

| Parameter | Value |
|---|---|
| Arp Zone | UPPER, UPPER2, LOWER1, LOWER2. ALL |

## Setting the Key Range for the Arpeggio Performances (Arpeggio Key Range)

You cannot perform in the normal manner in the range set for arpeggio performances, but you can specify the range used for the arpeggios, which even allows you, for example, to split the keyboard and play arpeggios as accompaniment in the left side, and the melody in the right.

Specify the leftmost and rightmost keys in the range to be used for arpeggios.

| Parameter | Value |
|---|---|
| Key Range | A0–C8 |

## Keeping the Force of the Notes Constant (Arpeggio Velocity)

This sets how strongly sounds are played when you press the keys.

| Parameter | Value | Description |
|---|---|---|
| Arp Velocity | REAL | Reproduces the actual strength of the keyboard touch. |
| | 1–127 | Sets the velocity at a fixed valued, regardless of the keyboard touch. |

**MEMO**

Even if Arpeggio Velocity is set to a value other than "REAL," the sound's velocity changes in accordance with the Arpeggio Style and Arpeggio Accent values.

## Rhythm/Arpeggio Grid

Refer to p. 94.

## Rhythm/Arpeggio Duration

Refer to p. 94.

## Changing the Accent Strength (Arpeggio Accent)

Modifies the strength of accents and the length of the notes to adjust the "groove" feel of the arpeggio. A setting of 100% will produce the most pronounced groove feel.

| Parameter | Value |
|---|---|
| Arp Accent | 0–100% |

## Changing the Octave Range in Arpeggio Style (Arpeggio Octave Range)

Sets the key range in octaves over which arpeggio will take place.

If you want the arpeggio to sound using only the notes that you actually play, set this parameter to 0.

To have the arpeggio sound using the notes you play and notes 1 octave higher, set this parameter to +1. A setting of -1 will make the arpeggio sound using the notes you play and notes 1 octave lower.

| Parameter | Value |
|---|---|
| Arp Octave Range | -3–+3 |

## Continuing Arpeggios Even After the Keys Are Released (Arpeggio Hold)

When the hold setting is switched on, you can have arpeggios continue to play even after you release the keys.

| Parameter | Value | Description |
|---|---|---|
| Arp Hold | ON | Arpeggios continue to play even after the keys are released. |
| | OFF | Arpeggios stop playing when the keys are released. |

**MEMO**

The [ARPEGGIO] indicator flashes when the Arpeggio Hold is set to ON.

**Switching Hold On and Off with the Buttons**

Even when not in the Edit screen, you can use the buttons to turn the Hold function on and off.

- **Hold down [ARPEGGIO] and press [CONTROL/ZONE LEVEL].**

Hold is turned on or off each time the button is pressed.

# About V-LINK

V-LINK ( **V-LINK** ) is a function that provides for the play of music and visual material. By using V-LINK-compatible video equipment, visual effects can be easily linked to, and made part of the expressive elements of a performance.

**(Examples)**

By using the RD-700SX and Edirol DV-7PR together, you can:

• Make Edirol DV-7PR playback settings remotely from the RD-700SX.

• Use the RD-700SX's keyboard to switch the Edirol DV-7PR's images (clips/palettes).

*   *In order to use V-LINK with the RD-700SX and Edirol DV-7PR, you will need to make connections using an USB-MIDI Interface (sold separately).*

## Connection Examples

Use a USB MIDI Interface cable to connect the RD-700SX's MIDI OUT connector to the DV-7PR's remote jack.

**NOTE**

Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

RD-700SX

MIDI OUT

USB MIDI interface cable

REMOTE

Edirol DV-7PR

Projector          Display
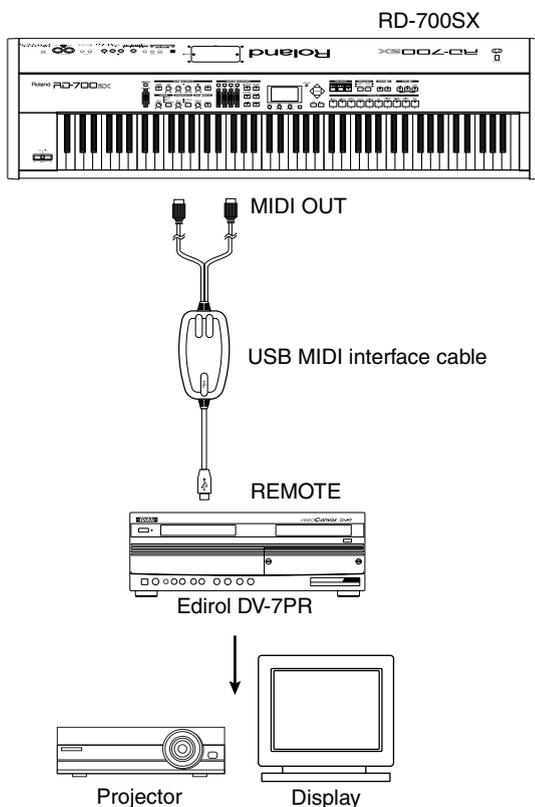
## Turning the V-Link ON/OFF

1. **Press [V-LINK] so the indicator is lighted.**
   [V-LINK] will light, and the V-Link setting will be on.
   In this state, you can operate the keyboard to manipulate images in sync with the playback of the RD-700SX.

2. **Press [V-LINK] again.**
   [V-LINK] will go out, and the V-Link setting will be off.

## V-Link Settings

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

```
=== EDIT MENU ===
      ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```
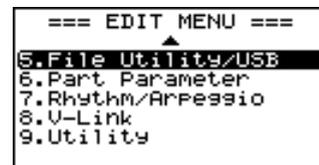
2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "8.V-Link."**

3. **Press [ENTER] to display the Edit screen.**

```
EDIT [V-Link]

V-Link Mode:    BANK/PC
V-Link Tx Channel: 10
V-Link OUT Port:    ALL
Key Range:      A 0-G#1
Lowest No.:          1
  WRITE    LOCAL OFF
```

4. **Press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to the parameter to be set.**

5. **Press [INC]/[DEC] to set the value.**

6. **When you have finished making the settings, press [EXIT].**
   You are returned to the previous screen.

   **(MEMO)**
   If you want to save this settings, press [F1(WRITE)]. Settings saved in the RD-700SX are not deleted even when the power is turned off.

   **NOTE**
   The RD-700SX does not support the Edirol DV-7PR's Dual Stream mode.

## Detailed Settings of V-Link

### V-Link Mode

This selects the type of MIDI message output.

| Parameter | Value | Description |
|---|---|---|
| V-Link Mode | BANK/PC | PC (Clip) output with the white keys, Bank Select (Pallet) output with the black keys |
| | NOTE | Note output |

### V-Link Tx Channel

This selects the MIDI channel used in outputting messages.

| Parameter | Value |
|---|---|
| V-Link Tx Channel | 1–16 |

### V-Link OUT Port

This selects the port used for outputting messages.

| Parameter | Value |
|---|---|
| V-Link OUT Port | ALL, OUT1, OUT2, USB |

### Key Range

Selecting the Range of Keys to Use as the V-Link Controller.

| Parameter | Value |
|---|---|
| Key Range | A0–C8 |

### Lowest No

This sets the number that is output when the lowest key in the range set with Key Range is pressed.

| Parameter | Value | Description |
|---|---|---|
| Lowest No | 1–128 | When V-Link Mode is set to BANK/PC |
| | 0–127 | When V-Link Mode is set to NOTE |

### Local ON/OFF

This setting determines whether or not the RD-700SX's sounds are played when a key within the range set with Key Range is pressed.

1.  **The function is alternately turned on or off each time press [F2] in the EDIT V-Link screen.**

| Parameter | Value | Description |
|---|---|---|
| Local ON/ OFF | LOCAL OFF | No sounds are played, even when keys in the range set in Key Range are pressed. |
| | LOCAL ON | Sounds are played when keys in the range set in Key Range are pressed. |

## Other Functions (Utility)

Utility includes functions for sending data to external MIDI sequencers and other devices and for restoring the settings to their original factory state.

**(MEMO)**

For more on "Rec Setting" in Utility menu, refer to **"Settings for Recording (Rec Setting)"** (p. 101).

## Transferring the RD-700SX's Settings to an External MIDI Device (Bulk Dump)

You can transfer the contents of Setups and the RD-700SX's system settings to an external MIDI device. This operation is called "bulk dump."

Use this procedure to save the data to an external MIDI device in situations such as when you want to perform by connecting another RD-700SX with the same settings, or to prevent your Setups and system settings from corruption.

1.  **Use a MIDI cable (optional) to connect the RD-700SX's MIDI OUT connector to the MIDI IN connector on an external sequencer.**

2.  **Press [EDIT], getting its indicator to light.**
    The Edit Menu screen appears.

```
=== EDIT MENU ===
          ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```
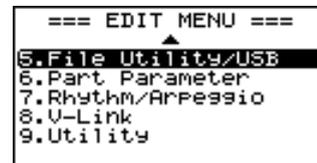
3.  **Press CURSOR [ ▼ ] to select "9.Utility."**

4.  **Press [ENTER] to display the Edit screen.**

```
EDIT [Utility]
0.Rec Setting
1.Bulk Dump Temporary
2.Bulk Dump SETUP
3.Factory Reset Curnt
4.Factory Reset All
```

5.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "1. Bulk Dump Temporary" or "2. Bulk Dump SETUP."**

| Parameter | Value |
|---|---|
| Bulk Dump Temporary | The contents of the currently selected Setup are transmitted. |
| Bulk Dump SETUP | The contents of Setups in the specified range are transmitted. |

## Bulk Dump Temporary

6. **Press CURSOR [ ▶ ].**

   A screen like the one shown below appears.

   ```
   Bulk Dump Temporary
   Temporary SETUP is
      [RD SETUP    ]
         Send OK?
   ```

7. **Put the external sequencer in record mode.**

8. **Press [ENTER] to transmit the settings.**

   To cancel the Bulk Dump, press [DEC].

   The message "Now, Executing..." appears in the display during transmission of the data.

9. **After the transmitting is finished, the display will indicate "COMPLETE!."**

   You are returned to the Edit screen.

10. **Stop the external sequencer.**

## Bulk Dump SETUP

6. **Press CURSOR [ ▶ ].**

   A screen like the one shown below appears.

   ```
   Bulk Dump SETUP
   From:                 1
   To:                 100
   Send System:        YES
         Send OK?
   ```

   | Parameter | Value |
   | --- | --- |
   | From | Setup number for the first Setup to be transmitted. |
   | To | Setup number for the last Setup to be transmitted. |
   | Send System | Determines whether the system settings are to be transmitted (YES), or not (NO). |

7. **Press CURSOR [ ▲ ] / [ ▼ ] and [INC]/[DEC] to set the transmitted Setups.**

8. **Put the external sequencer in record mode.**

9. **Press [ENTER] to transmit the settings.**

   To cancel the Bulk Dump, press [DEC].

   A screen like the one shown below appears.

   ```
   Bulk Dump SETUP
      Now Executing..
         1 / 100
         To cancel,
        press[EXIT]
   ```

10. **After the transmitting is finished, the display will indicate "COMPLETE!."**

    You are returned to the Edit screen.

11. **Stop the external sequencer.**

## Restoring saved settings to the RD-700SX

When returning settings saved to an external sequencer back to the RD-700SX, an Exclusive message is transmitted from the external sequencer, then the data is received by the RD-700SX.

**NOTE**

Be aware that when you restore Setups data to the RD-700SX, the data in the RD-700SX will be overwritten and lost.

1. **Use a MIDI cable to connect the MIDI OUT connector of the external sequencer to the MIDI IN connector of the RD-700SX.**

2. **Set the device ID number to the same setting as when you performed the bulk dump.**

   **MEMO**

   Setting the Device ID Number `**"Setting the Device ID Number (Device ID)"** (p. 81).

3. **Make sure that [EDIT] indicator is extinguished.**

   If the [EDIT] indicator is lit, press [EDIT] to turn the indicator light off and put the RD-700SX in normal performance mode.

4. **Transmit (play back) the data from the external sequencer.**

   **NOTE**

   **After playback of the Bulk Dump SETUP data, the RD-700SX writes the data to the internal memory. Be sure never to turn off the power while this data is being written (while "Now, writing Bulk Dump Data. Keep on POWER!" is showing).**

   **MEMO**

   For details on transmitting exclusive data, refer to the owner's manual for your sequencer.

   **NOTE**

   Play back the external sequencer at the same tempo you used when performing the bulk dump. If you use a faster tempo, the data may not be restored correctly.

   **NOTE**

   Data cannot be received if the Device ID of the receiving device differs from the Device ID used when Bulk Dump was carried out.

## Restoring the settings to the factory condition (Factory Reset)

The settings stored in the RD-700SX can be returned to their factory settings.

**NOTE**

Executing "Factory Reset All" results in deletion of the Setups (p. 56). If you want to keep the recorded content, save the Setup file to your computer (p. 105) or use "Bulk Dump (Bulk Dump SETUP)" to save it to an external sequencer (p. 99).

**NOTE**

When making USB connections, be absolutely sure to disconnect the USB cable before starting.

**1. Press [EDIT], getting the indicator to light.**
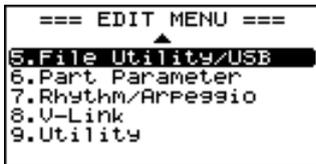
The Edit Menu screen appears.

```
=== EDIT MENU ===
         ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```

**2. Press CURSOR [ ▼ ] to select "9.Utility."**

**3. Press [ENTER] to display the Edit screen.**

```
EDIT [Utility]

0.Rec Setting
1.Bulk Dump Temporary
2.Bulk Dump SETUP
3.Factory Reset Curnt
4.Factory Reset All
```
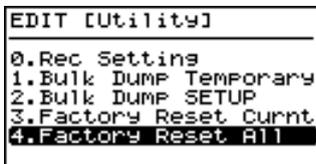
**4. Press CURSOR [ ▲ ]/[ ▼ ] to select "3. Factory Reset Curnt" or "4. Factory Reset All."**

| Parameter | Value |
|---|---|
| Factory Reset Curnt | The currently selected Setup returned to their factory settings. |
| Factory Reset All | The settings stored in the RD-700SX can be returned to their factory settings. |

**NOTE**

While the Factory Reset is in progress, no sounds are produced even when the keys are pressed. In addition, Rhythms and arpeggios being played are also stopped.

## Factory Reset Current

**5. Press [ENTER].**

A screen like the one shown below appears.

```
Factory Reset Current

Current SETUP is
 [001:RD SETUP    ]

    Load Preset OK?
```
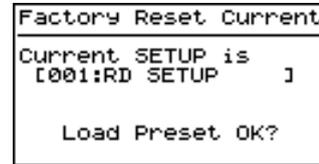
**NOTE**

Selecting "000" as the Setup initializes the ONETOUCH [PIANO] and [E. PIANO] settings.

**6. Press [ENTER].**

The confirmation message appears.

To cancel the Factory Reset, press [EXIT].

**7. Press [ENTER] once again to start the Factory Reset operation.**

**NOTE**

Never turn off the power during Factory Reset (while "Executing... Don't Power Off" appears in the display).

**8. After the Factory Reset operation is finished, the Utility screen returns to the display.**

## Factory Reset All
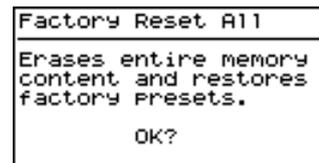
**5. Press [ENTER].**

A screen like the one shown below appears.

```
Factory Reset All

Erases entire memory
content and restores
factory presets.
      OK?
```

**6. Press [ENTER].**

The confirmation message appears.

To cancel the Factory Reset, press [EXIT].

**7. Press [ENTER] once again to start the Factory Reset operation.**

**NOTE**

Never turn off the power during Factory Reset (while "Executing... Don't Power Off" appears in the display).

**8. After the Factory Reset operation is finished, The Utility screen returns to the display.**

# Connecting External MIDI Devices

## Recording RD-700SX Performances to an External MIDI Sequencer

Now, try using an external sequencer to record your music onto multiple tracks, and then play back the recorded performance.

### Connecting to an External Sequencer

**NOTE**

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

MIDI IN    MIDI OUT

MIDI Sequencer

MIDI IN    MIDI OUT
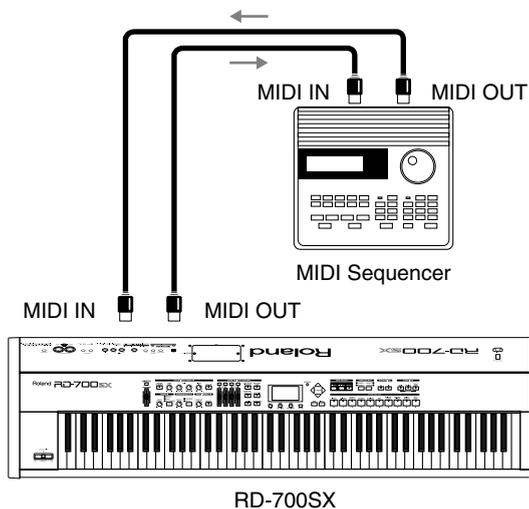
RD-700SX

1. **Before starting the connection procedure, make sure that the power to all devices has been turned off.**

2. **After reading "Connecting the RD-700SX to External Equipment" (p. 21), connect an audio device/system or headphones.**

3. **Connect the external MIDI sound device with the MIDI cable as shown in the figure above.**

4. **As described in "Turning On the Power" (p. 23), turn on the power of each device.**

### Settings for Recording (Rec Setting)

"Rec Mode" is a convenient feature to use when recording to an external sequencer.

When using the REC Mode function, you can get the most suitable settings for recording the RD-700SX's data to an external sequencer, without having to make all the Part and channel settings.

1. **Press [EDIT], getting the indicator to light.**
   The Edit Menu screen appears.

```
=== EDIT MENU ===
        ▲
5.File Utility/USB
6.Part Parameter
7.Rhythm/Arpeggio
8.V-Link
9.Utility
```

2. **Press CURSOR [ ▼ ] to select "9.Utility."**

3. **Press [ENTER] to display the Edit screen.**

```
EDIT [Utility]

0.Rec Setting
1.Bulk Dump Temporary
2.Bulk Dump SETUP
3.Factory Reset Curnt
4.Factory Reset All
```

4. **Press CURSOR [ ▼ ] to select "0. Rec Setting."**

5. **Press [ENTER], and the following screen will appear:**

```
Rec Setting

Rec Mode:        OFF
Local Switch:     ON
```
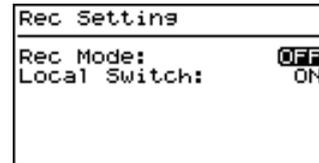
| Parameter | Value | Description |
|---|---|---|
| Rec Mode | ON, OFF | Ordinarily this will be set to OFF. When this is set to ON, settings appropriate for recording are used with respect to the output from MIDI OUT, regardless of the INTERNAL zone settings. |
| Local Switch | | This switches the Local Switch on and off. Although normally set to ON, it should be set to OFF when recording. For details, refer to the following section **"About the Local Switch"** (p. 102). |

6. **Press CURSOR [ ▲ ]/[ ▼ ] and press [INC]/[DEC] to set the values.**

7. **When you have finished making the settings, press [EDIT], extinguishing its indicator.**
   You are returned to the Tone screen.

   The settings for recording to the external sequencer are now selected.

**NOTE**

With Rec Mode set to ON, you cannot change the EXTERNAL Zone settings (p. 61). Pressing [EXTERNAL/INTERNAL] does not call up the External screen when Rec Mode is set to ON.

## Recording the Performance

Use the following procedure when recording to an external sequencer.

1. **Turn on the external sequencer's Thru function.**
   For details, refer to the following section "About Local Switch."
   Refer to your sequencer owner's manual for instructions on how to carry out this procedure.

2. **Select the Setup for the performance to be recorded.**
   For instructions on selecting the Setup, refer to p. 56.

3. **Set the Rec Setting.**
   Use the procedure described in the previous section "Settings for Recording" to make the following settings.
   **Rec Mode: ON**
   **Local Switch: OFF**

4. **Begin recording with the external sequencer.**

5. **Bulk Dump the Setup.**
   Using the Utility Bulk Dump Temporary in Edit mode, transmit the contents of the selected Setup to the external sequencer.
   For instructions on carrying out this operation, refer to **"Transferring the RD-700SX's Settings to an External MIDI Device (Bulk Dump)"** (p. 98).

6. **Perform on the RD-700SX.**

7. **When the performance is finished, stop recording with the external sequencer.**
   Recording is now complete.
   You can then listen to the recorded performance by playing it back on the external sequencer.

## Exiting Rec Mode

When Rec Mode is set to ON, you cannot change the EXTERNAL settings. When you have finished recording the performance, use the procedure described in the previous section "Settings for Recording" to set Rec Mode to OFF.

> **NOTE**
>
> The settings made in Rec Setting cannot be saved. Rec Setting automatically switch to **"Rec Mode: OFF, Local Switch: ON"** when the power is turned on.

## About the Local Switch

The switch that connects and disconnects the MIDI connection between the keyboard controller section and the sound generator section (p. 28) is called the Local switch. Since essential information describing what is being played on the keyboard won't reach the sound generator if the Local switch is set to OFF, the Local switch should normally be left ON.

However, if while performing you want to send that performance data to an external sequencer as MIDI messages to be recorded, you then perform with the externally connected MIDI sequencer set to MIDI Thru (whereby data received from MIDI IN is then output from the MIDI OUT with no changes made to the data).
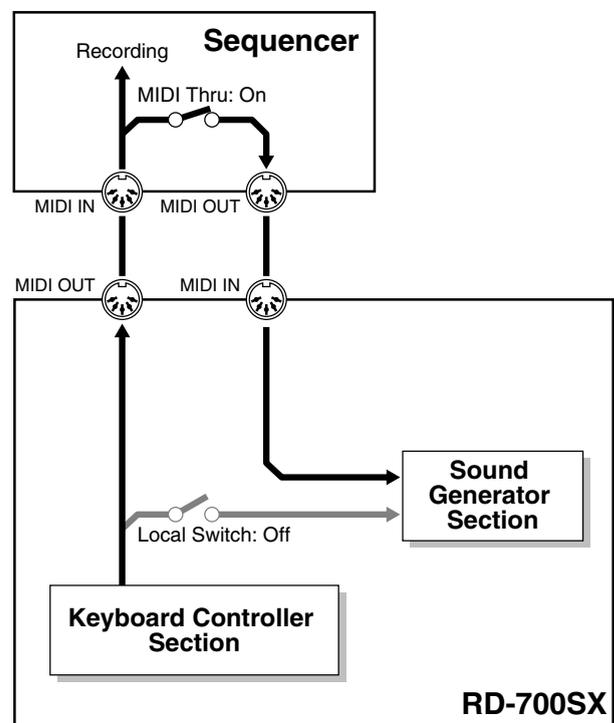


In this case, the data sent over two paths, i.e., the data sent directly from the keyboard controller section and the data sent from the keyboard controller section via the external sequencer, ends up being sent to the sound generator section simultaneously. Thus, for example, even when you play a "C" key only once, the note "C" cannot be sounded correctly, as the sound is played by the sound generator section twice.

# Playing the RD-700SX's Internal Sound Generator from an External MIDI Device

Try Playing the RD-700SX from an external MIDI Device.

## Making Connections

**NOTE**

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

MIDI OUT

MIDI Sequencer

MIDI IN
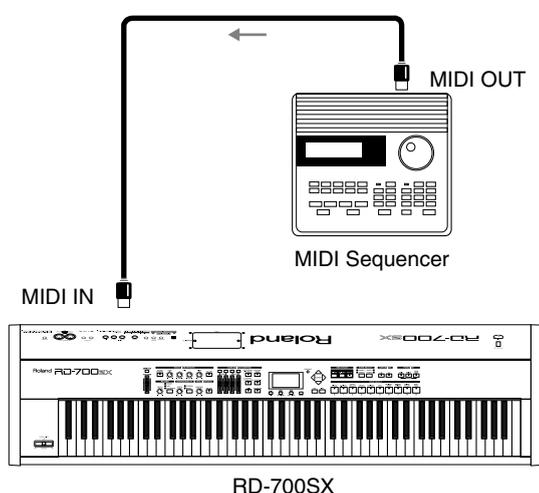
RD-700SX

1. **Before starting the connection procedure, make sure that the power to all devices has been turned off.**

2. **After reading "Connecting the RD-700SX to External Equipment" (p. 21), connect an audio device/system or headphones.**

3. **Connect the external MIDI device with the MIDI cable as shown in the figure above.**

4. **As described in "Turning On the Power" (p. 23), turn on the power of each device.**

## Setting the Channels

Set the RD-700SX's receive channel to match the external MIDI device's transmit channel.

For instructions on setting the RD-700SX's Receive channel, refer to **"Setting the Receive Channel (Receive Channel)"** (p. 92).

When both channels are matched, playing the external MIDI device produces sounds from the RD-700SX's sound generator.

**MEMO**

For instructions on how to set the transmit channel of the external MIDI device, refer to the owner's manual for your external MIDI device.

## Selecting RD-700SX Sounds from an External MIDI Device

Transmitting Bank Select (Controller Number 0, 32) and Program Change messages from the external MIDI device to the RD-700SX allows you to switch Setups and Tones.

## Switching Setups

The MIDI messages transmitted by the external MIDI device will be received by the RD-700SX to select Setups as shown in the following table.

| Number | Bank Select | | Program Change Number |
|--------|-----|-----|----------------|
| | MSB | LSB | |
| 1–100 | 085 | 0 | 1–100 |

When switching setups, you must match the MIDI channel of the transmitting device with the RD-700SX's Control channel (p. 81). When switching the tones in each part, match the MIDI channel of the transmitting device with the RD-700SX's Receive channel. However, when the Control channel and the Receive channel are both set to the same channel, the Control channel takes priority, and Setups are switched.

## Switching Tones

The MIDI messages transmitted by the external MIDI device will be received by the RD-700SX to select Tones as shown in the following table.

| Group | Number | Bank Select | | Program Change Number |
|-------|--------|------|-----|----------------|
| | | MSB | LSB | |
| PIANO | 001–020 | 087 | 064 | 001–020 |
| E.PIANO | 021–041 | 087 | 065 | 001–021 |
| CLAV/ MALLET | 042–062 | 087 | 066 | 001 - 021 |
| ORGAN | 063–072 | 112 | 0 | 001–010 |
| | 073–092 | 087 | 067 | 001–020 |
| STRINGS | 093–114 | 087 | 068 | 001–022 |
| PAD | 115–134 | 087 | 069 | 001–020 |
| GTR/BASS | 135–172 | 087 | 070 | 001–038 |
| BRASS/ WINDS | 173–196 | 087 | 071 | 001–024 |
| VOICE/ SYNTH | 197–218 | 087 | 072 | 001–022 |
| Rhythm Set | 219–223 | 086 | 064 | 001–005 |

**MEMO**

For details on the SRX Series Tones, refer to the owner's manual for the SRX Series Wave Expansion Board and p. 36.

# Connecting to Your Computer via USB (USB Mode)

## About USB Functions

The USB function used with the RD-700SX features two modes, a **Storage mode** used for transferring files, and a **MIDI mode** used for MIDI transmissions. Use of these modes requires that the settings be switched with the RD-700SX, and the two modes cannot be used simultaneously.

**NOTE**

Any switching of the USB mode (Storage mode/MIDI mode) must be performed before the RD-700SX and computer are connected.

The following shows the compatibility between operating systems and modes.

| Operating System | Storage Mode | MIDI Mode |
|---|---|---|
| Windows XP/2000/Me or later | o | o |
| Windows 98/98SE | x | o |
| Mac OS 9 (9.04 or later) | o | o |
| Mac OS X | o | o |

*   *The functions may not work correctly with some computers.*

## Switching Between Storage Mode and MIDI Mode

**NOTE**

Any switching of the USB mode (Storage mode/MIDI mode) must be performed before the RD-700SX and computer are connected.

**NOTE**

When switched to USB MIDI mode, the RD-700SX cannot receive signals through the MIDI IN connector.

1.  **Press [EDIT].**

2.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "5. File Utility/USB," and then press [ENTER].**

3.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "3. USB Setting," and then press [ENTER].**
    The USB Setting screen appears.

```
EDIT [USB Setting]

USB Mode:         MIDI
USB-MIDI Thru Sw: OFF


   WRITE
```

4.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "USB Mode."**

## Switching to USB Storage Mode

5.  **Use [INC]/[DEC] to select "STORAGE."**
    A confirmation dialog box appears.

```
The USB Cable must
be disconnected
before switching
the USB Modes.
  [EXIT]/[ENTER]
```
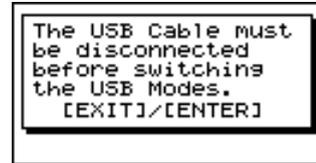
6.  **To switch the mode, press [ENTER]; to cancel, press [EXIT].**
    USB Storage mode will be selected.

7.  **If you want to save the setting, press [F1 (WRITE)].**

**MEMO**

For details on operations in USB Storage mode, refer to p. 89.

## Switching to MIDI Mode

5.  **Use [INC]/[DEC] to select "MIDI."**
    A confirmation dialog box appears.

```
The USB Cable must
be disconnected
before switching
the MIDI Modes.
  [EXIT]/[ENTER]
```

6.  **To switch the USB mode, press [ENTER]. If you decide not to switch, press [EXIT].**
    MIDI mode will be selected.

7.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "USB-MIDI Thru Sw."**

8.  **Use [INC]/[DEC] to select USB-MIDI Thru switch.**
    This setting determines whether the MIDI signals arriving at the MIDI IN connector are transmitted without change from the USB port (ON), or are not transmitted (OFF).

9.  **If you want to save settings, press [F1 (Write)].**

**MEMO**

For details on operations in MIDI mode, refer to **"Exchanging MIDI Messages with Your Computer (MIDI Mode)"** (p. 106).

# Exchanging Files with Computers (Storage Mode)

You can connect the RD-700SX to your computer with a USB cable and save (back up) the files contained in the RD-700SX's User memory to the computer's hard disk or other media.

You can also use SMF data created on computers with the RD-700SX. In this manner, you can use USB Storage mode to transfer Setups, SMF data, and other files back and forth between the RD-700SX and the computer.

**NOTE**

Connect and disconnect the USB cable only while the RD-700SX is turned off. Also be absolutely sure never to disconnect the USB cable or turn off the power to the equipment while the RD-700SX is in USB mode or when data is being transferred.

**NOTE**

Use a USB Cable no longer than 3 meters.

## Connections

1.  **Turn off the power to the RD-700SX.**

2.  **Start up the computer.**

3.  **Connect the RD-700SX and the computer with the USB cable.**

4.  **Turn on the power to the RD-700SX.**

5.  **Press [EDIT].**

6.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "5.File Utility/USB," then press [ENTER].**

7.  **Press CURSOR [ ▲ ]/[ ▼ ] to select "USB Storage," then press [ENTER].**
    A following screen appears.

```
EDIT [USB Storage]

Please connect the
USB cable, then press
[F2](CONNECT) button.
   EXIT    CONNECT
```

**NOTE**

When Storage mode is not selected in the USB settings, the warning "USB is in MIDI Mode!!" is displayed when [ENTER] is pressed in Step 7.

```
EDIT [USB Storage]

USB is in MIDI Mode!!
Press [F2] to set
Storage Mode
  EXIT  Set to Storage
```

If you want to switch to USB Storage mode, press [F2 (Set to Storage)] (the instrument switches to USB mode, and the USB Storage screen opens).
To cancel the procedure, press [F1 (EXIT)].

8.  **Press [F2 (CONNECT)].**
    "Connecting..." appears in the display, and the process of connecting begins.

```
EDIT [USB Storage]

   Connecting...

   EXIT
```

When the connection is acknowledged, "Connected!" appears, permitting confirmation of the files on the computer.
A USB storage screen appears.

**NOTE**

Some time may be required after the message "Connected!" is displayed before files can be recognized with the computer.

## Cautions Regarding Folders and Files

Please observe the following points when you have the RD-700SX connected to a computer via USB.

*   Do not use the computer to create RD-700SX folders.
*   Do not use the computer for operations on the RD-700SX, including formatting the RD-700SX's User memory, optimizing, scanning the disk, etc.
*   The RD-700SX can only handle file names that consist of single-byte alphanumeric characters.
*   Only the following types of files can be exchanged between the RD-700SX and computers.
    Standard MIDI Files ("MID" is used as the extension)
    SETUP Files ("RDS" is used as the extension)

## Exchanging Files

### Windows Me/2000/XP Users

1.  **In My Computer, double-click the "removable hard disk" icon.**
    The files saved in the RD-700SX's memory are displayed.

### Macintosh Users

1.  **Double-click the RD-700SX drive icon.**
    The files saved in the RD-700SX's memory are displayed.

## Exiting Storage Mode

### Windows Me/2000/XP Users

1.  **In My Computer, right-click the "removable hard disk" icon and execute "Remove."**

### Macintosh Users

1.  **Drag the RD-700SX drive icon into the trash.**

## Canceling USB Communication

If you want to power off the RD-700SX when it is connected to your computer in Storage mode, you must first cancel USB communication on your computer as described here.

### Windows Me/2000/XP Users

1. **Use the device eject button shown in the taskbar at the lower right of your computer screen to cancel the connection with the RD-700SX.**

### Macintosh Users

1. **Make sure that the RD-700SX drive icon is not on your desktop.**

# Exchanging MIDI Messages with Your Computer (MIDI Mode)

## Driver Installation and Settings

In order to use the RD-700SX as a USB MIDI device from your computer, you must first install the USB MIDI driver. The USB MIDI driver is on the included "RD-700SX Driver CD-ROM."

In order to use USB in MIDI mode, you must install the driver from the included CD-ROM into your computer.

The correct driver and the installation procedure will depend on your system and on the other programs you are using. Be sure to read the Readme file on the CD-ROM before installation.

**Windows XP/2000**

→ \W2kXP\Readme_E.htm

**Windows Me/98/98SE**

→ \W98Me\Readme_E.htm

**Mac OS 9 (9.04 or later)**

→ \Driver E (Mac OS 9)\Readme_e.htm

**Mac OS X**

→ \Driver (Mac OS X)\Readme_e.htm

**NOTE**

When you install the USB MIDI Driver, set the RD-700SX to "MIDI Mode"(p. 104).

**NOTE**

Use a USB Cable no longer than 3 meters.

**NOTE** **Caution when disconnecting the USB cable**

You must shut down your computer before disconnecting the USB cable. Disconnecting the cable while your computer's power is on may destabilize its operation.

## What is the USB MIDI Driver?

The USB MIDI Driver is a software which passes data between the RD-700SX and the application (sequencer software, etc.) that is running on the USB-connected computer.

The USB MIDI Driver sends data from the application to the RD-700SX, and passes data from the RD-700SX to the application.
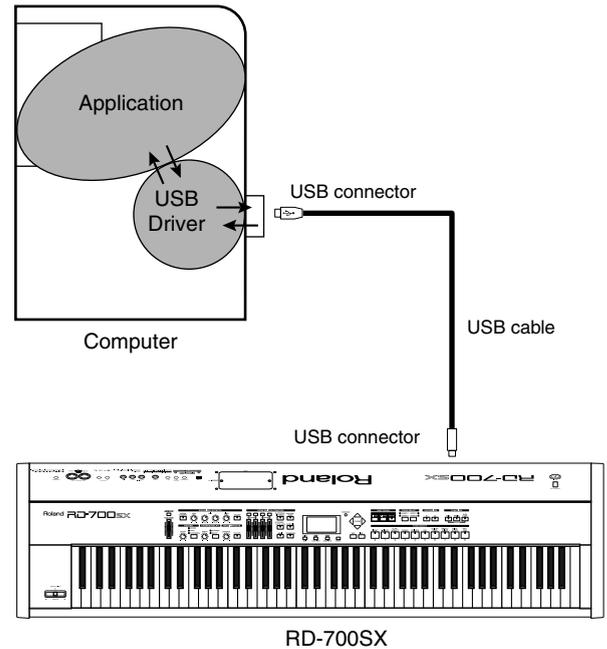


## Switching USB Drivers

The USB driver to be used when a computer is connected to the USB connector is determined as follows:

1. **Press [EDIT].**

2. **Press CURSOR [ ▲ ]/[ ▼ ] to select "1. SYSTEM," and then press [ENTER].**

3. **Press CURSOR [ ◀ ]/[ ▶ ] to switch screens, and press CURSOR [ ▲ ]/[ ▼ ] to move the cursor to "USB Driver."**

4. **Press [INC]/[DEC] to set the value.**

5. **After making the setting, turn off the power to the RD-700SX, then turn it on again.**

| Parameter | Value | Description |
|-----------|-------|-------------|
| USB Driver | Original | Select this when using the supplied driver with a USB connection. |
| | Generic | Select this when using a generic USB driver included with the OS with a USB connection. |

# MEMO

# Troubleshooting

If the RD-700SX does not function in the way you expect, first check the following points. If this does not resolve the problem, consult your dealer or a nearby Roland Service Station.

* *If certain messages appear in the display during operation, please refer to **Error Messages/Other Messages** (p. 111).*

| Problem | Check/Solution |
|---------|----------------|
| Power Not Coming On | Is the RD-700SX's power cord properly plugged into a power source as well as connected to the RD-700SX? |
| No Sound | Is the power for connected amps and speakers turned on? Is the volume turned all the way down? |
| | Is the VOLUME slider turned all the way down? |
| | Are all connections properly made?<br>• When using the RD-700SX as a stand-alone instrument, be sure to connect with audio cables or use headphones (p. 21). |
| | Are sounds audible with headphones connected?<br>• If sounds are audible through headphones, it may indicate that there is a short in an audio cable or some sort of amp or mixer problem. Check the cables and equipment once again. |
| | Is ZONE SWITCH set to OFF?<br>(p. 41, p. 64) |
| | Is a Part's volume turned off with the ZONE LEVEL slider? (p. 41, p. 64) |
| | If the sound for a pressed key does is not being played, is the Local Switch set to OFF?<br>• In the Utility Rec Setting in Edit mode, set the Local Switch to ON (p. 101). |
| | Are the effect settings correct?<br>Check following settings.<br>• ON/OFF settings for MULTI EFFECTS [ON/OFF] (p. 52)<br>• Other Multi-Effect settings in Edit mode (p. 87, p. 112) |
| | Are the Wave Expansion Boards correctly installed?<br>• When selecting settings while using the EXPANSION [A] or [B] Tones or Rhythm Sets, confirm that the specified Wave Expansion Boards are properly installed in the specified slots (p. 15). |
| | Has the volume been lowered by pedal operations or by MIDI messages (volume messages or expression messages) received from an external MIDI device? |

| Problem | Check/Solution |
|---------|----------------|
| No Sound for Specific Part | Is the Part's volume level turned down?<br>Check following settings.<br>• ZONE LEVEL sliders (p. 41, p. 64)<br>• Part Parameter Volume settings in Edit mode (p. 92) |
| | Are the Part's MIDI Receive channel and the MIDI Transmit channel for the connected MIDI device matched?<br>Check the MIDI Receive channel settings with Part Parameter Receive Channel in Edit mode (p. 92). |
| No Sound From the Connected MIDI Device | Is the device enabled to transmit MIDI messages?<br>• Set [EXTERNAL/INTERNAL] and ZONE SWITCH to ON (p. 64). MIDI messages cannot be transmitted if ZONE SWITCH is set to OFF. |
| | Is the RD-700SX's keyboard controller section MIDI Transmit channel matched to the connected MIDI device's MIDI Receive channel?<br>• Make the Ch(MIDI Transmit Channel) settings in the External screen (p. 62). |
| No Sound in a Specific Range | Has the range in which sounds are to be played (the key range) been set?<br>Check following settings.<br>• Settings for the LWR and UPR Parts in the External screen (p. 66)<br>• Key Range settings in Zone Info (p. 69) |
| | With certain Tones, for example Rhythm Sets, bass Tones, Timpani, and other Tones will not sound if a portion of the Tone falls outside the recommended range. |
| | Is V-Link switched on (p. 97)?<br>• Set the Local ON/OFF to ON in the V-Link Setting in Edit mode.<br>Sounds are played with keyboard even when V-Link is switched on. |
| Tones Are Altered | Did you call up a Setup?<br>• When a Setup is called up, the current Tone, effect, and other settings are disabled, and the selected Setup goes into effect (p. 56). Resave required settings to a Setup (p. 58). |
| | Did you press ONE TOUCH [PIANO] or [E.PIANO]?<br>• When ONE TOUCH [PIANO] or [E.PIANO] is pressed, the current Tone, effect, and other settings are disabled, and settings for use in piano performances go into effect (p. 32). Resave required settings to a Setup (p. 58). |

| Problem | Check/Solution |
|---|---|
| Tones Are Altered | Is the Tone Control function assigned to the MULTI EFFECTS [CONTROL] knob?<br>• Check the Control Knob Assign settings in Edit mode (p. 85). |
| | When a mono connection is used, the tone quality can vary depending on the tone selected and the register in which it is used.<br>• For optimal listening quality, connecting in stereo is recommended.<br>• "019 SuperiorMono" or "020 GrandRD Mono" is recommended when performing with piano tones using a mono connection. |
| When UPPER Tone is Selected, LOWER Changes to Same Tone | Are the UPPER Part and the LOWER Part set to the same value in the Part Assign settings in Zone Info (p. 69)? |
| Tone Doesn't Change/ Keyboard Not Switching to Split | Is [EXTERNAL/INTERNAL] set to ON?<br>• When [EXTERNAL/INTERNAL] is set to ON, the external sound generator is controlled. To change the RD-700SX's Tones and make settings in Keyboard mode, set [EXTERNAL/INTERNAL] to OFF (p. 64). |
| | Is the ZONE SELECT button for the Zone containing the Tone you want to change set to ON (p. 41)? |
| | Is [NUM LOCK] set to on?<br>• Tone categories cannot be selected with the TONE SELECT buttons when [NUM LOCK] is set to on. |
| Rhythm Not Sounding | Has the System Clock Source setting in Edit mode been set to MIDI (p. 81)? Do you have an external MIDI device connected?<br>• You cannot set the tempo with the RD-700SX when Clock Source is set to MIDI. Accordingly, if no external MIDI device is connected, then no tempo setting is made for the Rhythm, and so the Rhythm does not sound. |
| | Set the Part 10 Receive Channel setting in Part Parameter in Edit mode to 10 (p. 92). |
| | Is "SONG/ARP" screen selected for the Rhythm/Song/Arpeggio screen? Pressing [RHYTHM/SONG] to switch "RHYTHM/ARP" screen (p. 48). |
| Multi-effects are not applied to the Lower part | Check the MFX Source and MFX Dest settings (p. 86).<br>• With certain settings, the Lower Part's MFX settings are disregarded. |

| Problem | Check/Solution |
|---|---|
| Effects Not Applied/Effects Sound Wrong | Is a TW-Organ 1–10 Tone selected? Effects are applied differently to the Tone Wheel than they are with other effects.<br>• Effects set in Effects MFX Source (p. 86) are applied regardless of each Part MFX Switch ON/OFF setting in the Part Parameter settings (p. 92), or the MFX setting for each Tone in the Tone Info (p. 68).<br>• When Tone Wheel is selected for multiple Parts, it is applied to all the Parts, regardless of whether the Rx. Pitch Bend and Rx. Hold-1 in the Part Parameter settings are ON or OFF (p. 92). |
| | Is MULTI EFFECTS [ON/OFF] set to OFF (p. 52)? |
| | Is the MULTI EFFECTS [CONTROL] knob set to TEMPO?<br>• In Edit mode, set the Control Knob Assign setting in Effects as a value other than TEMPO (p. 85). |
| | Even when MFX Dest (p. 87) is set to "ALL," no effects are applied to parts in which the Edit mode Part Parameter MFX Switch (p. 92) is set to OFF. |
| | In some cases where the delay timing selected in the DELAY settings in Effects is set to a note value, the delay sound may not be heard. Either adjust the tempo or change the numerical value of the delay timing (p. 122, p. 144). |
| No Pitch Bend When Pitch Bend Lever is Moved | Is the Tone Wheel screen appearing in the display?<br>• The pitch bend effect cannot be applied with the pitch bend lever while the Tone Wheel screen is in the display. In this case, the pitch bend lever functions as a slow/fast switch for the Rotary effect (p. 53). |
| Sounds Come From Left or Right Each Time Key is Pressed (Panned) | In some Tones, the settings are such that sounds randomly play from the left or right side (are panned) each time the keys are pressed. These settings cannot be changed. |
| Sound is Distorted | Sounds can be distorted due to equalizer, multi-effect, and Part volume settings. Adjust the following settings.<br>• ZONE LEVEL sliders (p. 41)<br>• System Master Volume settings (p. 80)<br>• Equalizer Input Gain settings (p. 45) |
| | Is a distortion-type effect being applied to the sound (p. 71, p. 87)? |

| Problem | Check/Solution |
|---|---|
| Cannot Select the Tone Wheel Screen | The screen is displayed by selecting a Organ Tone (TW-Organ 1–10) for any of the UPPER1, UPPER2, or LOWER Parts in the Tone screen, and then pressing CURSOR [◀] (p. 53). |
| Key Range Settings Not Effective | Is [SPLIT] set to OFF?<br>• Key Range goes into effect when [SPLIT] set to ON (p. 66, p. 69). |
| Tempo Doesn't Change | Is the System Clock Source setting in Edit mode set to "MIDI"?<br>• When you want to perform using the RD-700SX's tempo, set this to "INT" (p. 81). |
| Pitch is Odd | Depending on the Tone selected, pitches played in certain registers will be changed and played at other pitches. |
| | Is Coarse Tune, Fine Tune, or Stretch Tune set for any specific Part?<br>Check the following settings.<br>• Tone Info Course Tune, Fine Tune (p. 71)<br>• Stretch Tune settings in Edit mode (p. 82)<br>• C.T and F.T setting in External screen (p. 67) |
| | Has the RD-700SX gone out of tune?<br>Check the following settings.<br>• System Master Tune settings in Edit mode (p. 27).<br>• System Temperament settings in Edit mode (p. 82)<br>• Micro Tune settings in Piano Edit (p. 75) |
| | Has the pitch been changed by pedal operations or by Pitch Bend messages received from an external MIDI device? |
| Sound is Cut Off | When you try playing more than the maximum 128 voices simultaneously, sounds currently being played may be cut out.<br>• Increase the Voice Reserve settings for the Parts you do not want to have cut off (p. 92). |
| Sound Keeps Playing When Key is Pressed | Is the pedal polarity reversed?<br>• Check the System Pedal Polarity settings in Edit mode (p. 81). |
| Exclusive Messages Cannot Be Received | Is the Device ID number of the transmitting device matched to the RD-700SX's Device ID number?<br>• Check the System Device ID settings in Edit mode (p. 81). |

| Problem | Check/Solution |
|---|---|
| Song Data Not Played Back Correctly | Is the Receive GM/GM2 System On Switch set to ON?<br>• Set the System Rx GM System On or System Rx GM2 System On to ON in Edit mode (p. 82). |
| | Are you playing back GS Format song data?<br>• Once the RD-700SX receives a GS Reset message, it then is enabled for GS Format. This permits playback of music files bearing the GS logo (GS music files). However, data created exclusively for the Sound Canvas Series may not play back properly on the RD-700SX. |
| Pedal function is not affected | Is the System Pedal Mode setting in Edit mode set to "SYSTEM"?<br>• Set this to "SETUP" (p. 80). |

# Error Messages/Other Messages

## Error Messages

**Indication:** **MIDI Buffer Full**

Situation: Due to an inordinate volume of MIDI messages received, the RD-700SX has failed to process them properly.

Action: Reduce the amount of MIDI messages to be transmitted.

**Indication:** **MIDI Communication Error**

Situation: A problem has occurred with the MIDI cable connections.

Action: Check that MIDI cables are not broken or pulled out.

**Indication:** **BULK DUMP: Receive Data Error**

Situation: A MIDI message was received incorrectly.

Action: If the same error message is displayed repeatedly, there is a problem with the MIDI messages that are being transmitted to the RD-700SX.

**Indication:** **File Error**

Situation: A file can't be read. Or a file may be broken.

Action: Be sure you're using Standard MIDI Files ("MID" is used as the extension) and Setup Files ("RDS" is used as the extension).

**Indication:** **System Error**

Situation: There may be a problem with the system.

Action: Turn on the power once again, then repeat the procedure.

## Other Messages

**Indication:** **Now, writing Bulk Dump Data. Keep on POWER!!**

Situation: Indicated when Bulk Dump data is being received.

Action: Once received, the data is written to the RD-700SX's internal memory; be absolutely sure not to turn off the power until "COMPLETED" appears in the display.

**Indication:** **Unavailable while in Rec Mode**

Situation: This is displayed when the [EXTERNAL/INTERNAL] button is pressed with Rec Mode "ON."

Action: When Rec Mode is "ON," you cannot change the External settings. To make changes to the External settings, set Rec Mode to "OFF" (p. 101).

**Indication:** **Memory Full!**

Situation: There is not sufficient space left on the user memory.

Action: Delete files stored on the RD-700SX memory.

**Indication:** **File Exists. Overwrite OK?**

Situation: A file with the same name is already exists.

Action: If you execute the procedure, the file will be overwrite. If you don't want to overwrite, change a filename.

**Indication:** **Can not Save**

Situation: The save could not be performed correctly.

Action: The internal memory capacity of the RD-700SX may be full. Delete files stored on the RD-700SX memory.

**Indication:** **Can not Delete**

Situation: The data cannot be deleted.

Action: Select the File Type to "ALL FILES" in the DELETE screen, then repeat the procedure.

**Indication:** **Panel is Locked**

Situation: Buttons will not function.

Action: Press [EXIT] to cancel.

# Effect/Parameter List

## Multi-Effects Parameter

### 00: THRU

### 01: EQUALIZER

This is a four-band stereo equalizer (low, mid x 2, high).

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Low Gain, High Gain, Level | |

| Parameter | Value | Description |
|---|---|---|
| Low Freq | 200, 400 Hz | Frequency of the low range |
| Low Gain | -15– +15 dB | Gain of the low range |
| Mid1 Freq | 200–8000 Hz | Frequency of the middle range 1 |
| Mid1 Gain | -15– +15 dB | Gain of the middle range 1 |
| Mid1 Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Width of the middle range 1<br>Set a higher value for Q to narrow the range to be affected. |
| Mid2 Freq | 200–8000 Hz | Frequency of the middle range 2 |
| Mid2 Gain | -15– +15 dB | Gain of the middle range 2 |
| Mid2 Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Width of the middle range 2<br>Set a higher value for Q to narrow the range to be affected. |
| High Freq | 2000, 4000, 8000 Hz | Frequency of the high range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

### 02: SPECTRUM

This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.

| | Assignable Parameters |
|---|---|
| MFX Control | Level |

| Parameter | Value | Description |
|---|---|---|
| Band1 (250Hz) | -15– +15 dB | Gain of each frequency band |
| Band2 (500Hz) | | |
| Band3 (1000Hz) | | |
| Band4 (1250Hz) | | |
| Band5 (2000Hz) | | |
| Band6 (3150Hz) | | |
| Band7 (4000Hz) | | |
| Band8 (8000Hz) | | |
| Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Simultaneously adjusts the width of the adjusted ranges for all the frequency bands. |
| Level | 0–127 | Output Level |

### 03: ISOLATOR

This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.

| | Assignable Parameters |
|---|---|
| MFX Control | Boost/Cut Low, Boost/Cut Mid, Boost/Cut High |

| Parameter | Value | Description |
|---|---|---|
| Boost/Cut Low<br>Boost/Cut Mid<br>Boost/Cut High | -60– +4 dB | These boost and cut each of the High, Middle, and Low frequency ranges.<br>At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound. |

| Parameter | Value | Description |
|---|---|---|
| APhase Low Sw | OFF, ON | Turns the Anti-Phase function on and off for the Low frequency ranges.<br>When turned on, the counter-channel of stereo sound is inverted and added to the signal. |
| APhase Low Lev | 0–127 | Adjusts the level settings for the Low frequency ranges.<br>Adjusting this level for certain frequencies allows you to lend emphasis to specific parts. (This is effective only for stereo source.) |
| APhase Mid Sw | OFF, ON | Settings of the Anti-Phase function for the Middle frequency ranges |
| APhase Mid Lev | 0–127 | The parameters are the same as for the Low frequency ranges. |
| Low Boost Sw | OFF, ON | Turns Low Booster on/off.<br>This emphasizes the bottom to create a heavy bass sound. |
| Low Boost Level | 0–127 | Increasing this value gives you a heavier low end.<br>Depending on the Isolator and filter settings this effect may be hard to distinguish. |
| Level | 0–127 | Output Level |

### 04: LOW BOOST

Boosts the volume of the lower range, creating powerful lows.

| | Assignable Parameters |
|---|---|
| MFX Control | Boost Gain, Boost Freq |

| Parameter | Value | Description |
|---|---|---|
| Boost Freq | 50–125 Hz | Center frequency at which the lower range will be boosted |
| Boost Gain | 0– +12 dB | Amount by which the lower range will be boosted |
| Boost Width | WIDE, MID, NARROW | Width of the lower range that will be boosted |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Level | 0–127 | Output level |

### 05: SUPER FILTR (SUPER FILTER)

This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.

| | Assignable Parameters |
|---|---|
| MFX Control | Filter Cutoff, Filter Resonance, Rate, Depth |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | LPF, BPF, HPF, NOTCH | Filter type<br>Frequency range that will pass through each filter<br>**LPF**: Frequencies below the cutoff<br>**BPF**: Frequencies in the region of the cutoff<br>**HPF**: Frequencies above the cutoff<br>**NOTCH**: Frequencies other than the region of the cutoff |
| Filter Slope | -12, -24, -36 dB | Amount of attenuation per octave<br>**-36 dB**: Extremely steep<br>**-24 dB**: Steep<br>**-12 dB**: Gentle |
| Filter Cutoff | 0–127 | Cutoff frequency of the filter<br>Increasing this value will raise the cutoff frequency. |
| Filter Resonance | 0–127 | Filter resonance level<br>Increasing this value will emphasize the region near the cutoff frequency. |
| Filter Gain | 0– +12 dB | Amount of boost for the filter output |

| Parameter | Value | Description |
|---|---|---|
| Modulation Sw | OFF, ON | On/off switch for cyclic change |
| Modulation Wave | TRI, SQR, SIN, SAW1, SAW2 | How the cutoff frequency will be modulated<br>**TRI**: Triangle wave<br>**SQR**: Square wave<br>**SIN**: Sine wave<br>**SAW1**: Sawtooth wave (upward)<br>**SAW2**: Sawtooth wave (downward) |
| | | SAW1　　　　　　SAW2 |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Rate of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Rate of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Attack | 0–127 | Speed at which the cutoff frequency will change<br>This is effective if Modulation Wave is SQR, SAW1, or SAW2. |
| Level | 0–127 | Output level |

## 06: STEP FILTER

This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Filter Resonance, Filter Type | |

| Parameter | Value | Description |
|---|---|---|
| Step 01–16 | 0–127 | Cutoff frequency at each step |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Rate of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Rate of modulation (note) |
| Attack | 0–127 | Speed at which the cutoff frequency changes between steps |
| Filter Type | LPF, BPF, HPF, NOTCH | Filter type<br>Frequency range that will pass through each filter<br>**LPF**: Frequencies below the cutoff<br>**BPF**: Frequencies in the region of the cutoff<br>**HPF**: Frequencies above the cutoff<br>**NOTCH**: Frequencies other than the region of the cutoff |
| Filter Slope | -12, -24, -36 dB | Amount of attenuation per octave<br>**-12 dB**: Gentle<br>**-24 dB**: Steep<br>**-36 dB**: Extremely steep |
| Filter Resonance | 0–127 | Filter resonance level<br>Increasing this value will emphasize the region near the cutoff frequency. |
| Filter Gain | 0– +12 dB | Amount of boost for the filter output |
| Level | 0–127 | Output level |

## 07: ENHANCER

Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Sens, Mix | |

| Parameter | Value | Description |
|---|---|---|
| Sens | 0–127 | Sensitivity of the enhancer |
| Mix | 0–127 | Level of the overtones generated by the enhancer |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 08: AUTO WAH

Cyclically controls a filter to create cyclic change in timbre.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Manual, Sens, Rate, Depth, Phase | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | LPF, BPF | Type of filter<br>**LPF**: The wah effect will be applied over a wide frequency range.<br>**BPF**: The wah effect will be applied over a narrow frequency range. |
| Manual | 0–127 | Adjusts the center frequency at which the effect is applied. |
| Peak | 0–127 | Adjusts the amount of the wah effect that will occur in the range of the center frequency.<br>Set a higher value for Q to narrow the range to be affected. |
| Sens | 0–127 | Adjusts the sensitivity with which the filter is controlled. |
| Polarity | UP, DOWN | Sets the direction in which the frequency will change when the auto-wah filter is modulated.<br>**UP**: The filter will change toward a higher frequency.<br>**DOWN**: The filter will change toward a lower frequency. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 09: HUMANIZER

Adds a vowel character to the sound, making it similar to a human voice.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Drive, Depth, Vowel1, Vowel2, Manual | |

| Parameter | Value | Description |
|---|---|---|
| Drive Sw | OFF, ON | Turns Drive on/off. |
| Drive | 0–127 | Degree of distortion<br>Also changes the volume. |
| Vowel1 | a, e, i, o, u | Selects the vowel. |
| Vowel2 | a, e, i, o, u | |

| Parameter | Value | Description |
|---|---|---|
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency at which the two vowels switch (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency at which the two vowels switch (note) |
| Depth | 0–127 | Effect depth |
| Input Sync Sw | OFF, ON | Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF). |
| Input Sync Thres | 0–127 | Volume level at which reset is applied |
| Manual | 0–100 | Point at which Vowel 1/2 switch **49 or less**: Vowel 1 will have a longer duration. **50**: Vowel 1 and 2 will be of equal duration. **51 or more**: Vowel 2 will have a longer duration. |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Pan | L64–63R | Stereo location of the output |
| Level | 0–127 | Output level |

## 10: SP.SIMULATR (SPEAKER SIMULATOR)

Simulates the speaker type and mic settings used to record the speaker sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Direct Level, Mic Level, Speaker | |

| Parameter | Value | Description |
|---|---|---|
| Speaker | (See the table.) | Type of speaker |
| Mic Setting | 1, 2, 3 | Adjusts the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3. |
| Mic Level | 0–127 | Volume of the microphone |
| Direct Level | 0–127 | Volume of the direct sound |
| Level | 0–127 | Output Level |

### Specifications of each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

| Type | Cabinet | Speaker | Microphone |
|---|---|---|---|
| SMALL 1 | small open-back enclosure | 10 | dynamic |
| SMALL 2 | small open-back enclosure | 10 | dynamic |
| MIDDLE | open back enclosure | 12 x 1 | dynamic |
| JC-120 | open back enclosure | 12 x 2 | dynamic |
| BUILT-IN 1 | open back enclosure | 12 x 2 | dynamic |
| BUILT-IN 2 | open back enclosure | 12 x 2 | condenser |
| BUILT-IN 3 | open back enclosure | 12 x 2 | condenser |
| BUILT-IN 4 | open back enclosure | 12 x 2 | condenser |
| BUILT-IN 5 | open back enclosure | 12 x 2 | condenser |
| BG STACK 1 | sealed enclosure | 12 x 2 | condenser |
| BG STACK 2 | large sealed enclosure | 12 x 2 | condenser |
| MS STACK 1 | large sealed enclosure | 12 x 4 | condenser |
| MS STACK 2 | large sealed enclosure | 12 x 4 | condenser |
| METAL STACK | large double stack | 12 x 4 | condenser |
| 2-STACK | large double stack | 12 x 4 | condenser |
| 3-STACK | large triple stack | 12 x 4 | condenser |

## 11: PHASER

This is a stereo phaser. A phase-shifted sound is added to the original sound and modulated.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Resonance, Manual, Mix | |

| Parameter | Value | Description |
|---|---|---|
| Mode | 4-STAGE, 8-STAGE, 12-STAGE | Number of stages in the phaser |
| Manual | 0–127 | Adjusts the basic frequency from which the sound will be modulated. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Polarity | INVERSE, SYNCHRO | Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE**: The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO**: The left and right phase will be the same. Select this when inputting a stereo source. |
| Resonance | 0–127 | Amount of feedback |
| Cross Feedback | -98– +98 % | Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Mix | 0–127 | Level of the phase-shifted sound |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 12: STEP PHASER

The phaser effect will be varied gradually.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | StepRate, Depth, Resonance, Manual, Mix | |

| Parameter | Value | Description |
|---|---|---|
| Mode | 4-STAGE, 8-STAGE, 12-STAGE | Number of stages in the phaser |
| Manual | 0–127 | Adjusts the basic frequency from which the sound will be modulated. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Polarity | INVERSE, SYNCHRO | Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE**: The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO**: The left and right phase will be the same. Select this when inputting a stereo source. |
| Resonance | 0–127 | Amount of feedback |
| Cross Feedback | -98– +98 % | Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase. |

| Parameter | Value | Description |
|---|---|---|
| Step Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| StepRate(Hz) | 0.10–20.00 Hz | Rate of the step-wise change in the phaser effect (Hz) |
| Step Rate ( ♪ ) | note (*1) | Rate of the step-wise change in the phaser effect (note) |
| Mix | 0–127 | Level of the phase-shifted sound |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 13: MULT PHASER (MULTI STAGE PHASER)

Extremely high settings of the phase difference produce a deep phaser effect.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Depth, Resonance, Manual, Mix | |

| Parameter | Value | Description |
|---|---|---|
| Mode | 4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE | Number of phaser stages |
| Manual | 0–127 | Adjusts the basic frequency from which the sound will be modulated. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Resonance | 0–127 | Amount of feedback |
| Mix | 0–127 | Level of the phase-shifted sound |
| Pan | L64–63R | Stereo location of the output sound |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 14: INF PHASER (INFINITE PHASER)

A phaser that continues raising/lowering the frequency at which the sound is modulated.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Speed, Resonance, Mix, Pan | |

| Parameter | Value | Description |
|---|---|---|
| Mode | 1, 2, 3, 4 | Higher values will produce a deeper phaser effect. |
| Speed | -100– +100 | Speed at which to raise or lower the frequency at which the sound is modulated (+: upward / -: downward) |
| Resonance | 0–127 | Amount of feedback |
| Mix | 0–127 | Volume of the phase-shifted sound |
| Pan | L64–63R | Panning of the output sound |
| Low Gain | -15– +15 dB | Amount of boost/cut for the low-frequency range |
| High Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| Level | 0–127 | Output volume |

## 15: RING MODLTR (RING MODULATOR)

This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Frequency, Sens, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Frequency | 0–127 | Adjusts the frequency at which modulation is applied. |
| Sens | 0–127 | Adjusts the amount of frequency modulation applied. |
| Polarity | UP, DOWN | Determines whether the frequency modulation moves towards higher frequencies (UP) or lower frequencies (DOWN). |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 16: STEP R.MOD (STEP RING MODULATOR)

This is a ring modulator that uses a 16-step sequence to vary the frequency at which modulation is applied.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Attack, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Step 01–16 | 0–127 | Frequency of ring modulation at each step |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Rate at which the 16-step sequence will cycle (Hz) |
| Rate ( ♪ ) | note (*1) | Rate at which the 16-step sequence will cycle (note) |
| Attack | 0–127 | Speed at which the modulation frequency changes between steps |
| Low Gain | -15– +15 dB | Amount of boost/cut for the low-frequency range |
| High Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| Balance | D100:0W– D0:100W | Volume balance of the original sound (D) and effect sound (W) |
| Level | 0–127 | Output volume |

## 17: TREMOLO

Cyclically modulates the volume to add tremolo effect to the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Depth, Mod Wave | |

| Parameter | Value | Description |
|---|---|---|
| Mod Wave | TRI, SQR, SIN, SAW1, SAW2 | Modulation Wave **TRI**: Triangle wave **SQR**: Square wave **SIN**: Sine wave **SAW1/2**: Sawtooth wave |

SAW1                    SAW2

| Parameter | Value | Description |
|---|---|---|
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of the change (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of the change (note) |
| Depth | 0–127 | Depth to which the effect is applied |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 18: AUTO PAN

Cyclically modulates the stereo location of the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Depth, Mod Wave | |

| Parameter | Value | Description |
|---|---|---|
| Mod Wave | TRI, SQR, SIN, SAW1, SAW2 | Modulation Wave<br>**TRI**: triangle wave<br>**SQR**: square wave<br>**SIN**: sine wave<br>**SAW1/2**: sawtooth wave<br><br>SAW1     SAW2<br>R           R<br>L           L |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of the change (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of the change (note) |
| Depth | 0–127 | Depth to which the effect is applied |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 19: STEP PAN

This uses a 16-step sequence to vary the panning of the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Attack | |

| Parameter | Value | Description |
|---|---|---|
| Step 01–16 | L64–63R | Pan at each step |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Rate at which the 16-step sequence will cycle (Hz) |
| Rate ( ♪ ) | note (*1) | Rate at which the 16-step sequence will cycle (note) |
| Attack | 0–127 | Speed at which the pan changes between steps |
| Input Sync Sw | OFF, ON | Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF) |
| Input Sync Thres | 0–127 | Volume at which an input note will be detected |
| Level | 0–127 | Output volume |

## 20: SLICER

By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Attack, Shuffle | |

| Parameter | Value | Description |
|---|---|---|
| Step 01–16 | 0–127 | Level at each step |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Rate at which the 16-step sequence will cycle (Hz) |
| Rate ( ♪ ) | note (*1) | Rate at which the 16-step sequence will cycle (note) |
| Attack | 0–127 | Speed at which the level changes between steps |
| Input Sync Sw | OFF, ON | Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF) |
| Input Sync Thres | 0–127 | Volume at which an input note will be detected |
| Mode | LEGATO, SLASH | Sets the manner in which the volume changes as one step progresses to the next.<br>**LEGATO**: The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume.<br>**SLASH**: The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step. |
| Shuffle | 0–127 | Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...).<br>The higher the value, the later the beat progresses. |
| Level | 0–127 | Output level |

## 21: ROTARY

The Rotary effect simulates the sound of the rotary speakers often used with the electric organs of the past. Since the movement of the high range and low range rotors can be set independently, the unique type of modulation characteristic of these speakers can be simulated quite closely. This effect is most suitable for electric organ Patches.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Speed, Tw Fast Rate, Wf Fast Rate, Separation | |

| Parameter | Value | Description |
|---|---|---|
| Speed | SLOW, FAST | Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor.<br>**SLOW**: Slows down the rotation to the Slow Rate.<br>**FAST**: Speeds up the rotation to the Fast Rate. |
| Wf Slow Rate | 0.05–10.00 Hz | Slow speed (SLOW) of the low frequency rotor |
| Wf Fast Rate | 0.05–10.00 Hz | Fast speed (FAST) of the low frequency rotor |

| Parameter | Value | Description |
|---|---|---|
| Woofer Accel | 0–15 | Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times. |
| Wf Level | 0–127 | Volume of the low frequency rotor |
| Tw Slow Rate | 0.05–10.00 Hz | Settings of the high frequency rotor The parameters are the same as for the low frequency rotor |
| Tw Fast Rate | 0.05–10.00 Hz | |
| Tweeter Accel | 0–15 | |
| Tweeter Level | 0–127 | |
| Separation | 0–127 | Spatial dispersion of the sound |
| Level | 0–127 | Output Level |

## 22: VK ROTARY

This type provides modified response for the rotary speaker, with the low end boosted further.

This effect is a descendant of the Roland VK Series' built-in rotary speaker.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Speed, Brake, Tw Fast Rate, Wf Fast Rate | |

| Parameter | Value | Description |
|---|---|---|
| Speed | SLOW, FAST | Rotational speed of the rotating speaker |
| Brake | OFF, ON | Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume. |
| Wf Slow Rate | 0.05–10.00 Hz | Low-speed rotation speed of the woofer |
| Wf Fast Rate | 0.05–10.00 Hz | High-speed rotation speed of the woofer |
| Wf Trans Up | 0–127 | Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast. |
| Wf Trans Down | 0–127 | Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow. |
| Wf Level | 0–127 | Volume of the woofer |
| Tw Slow Rate | 0.05–10.00 Hz | Settings of the tweeter The parameters are the same as for the woofer. |
| Tw Fast Rate | 0.05–10.00 Hz | |
| Tw Trans Up | 0–127 | |
| Tw Trans Down | 0–127 | |
| Tweeter Level | 0–127 | |
| Spread | 0–10 | Sets the rotary speaker stereo image. The higher the value set, the wider the sound is spread out. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Level | 0–127 | Output Level |

## 23: CHORUS

This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter **OFF**: No filter is used **LPF**: Cuts the frequency range above the Cutoff Freq **HPF**: Cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the chorus sound (W) |
| Level | 0–127 | Output Level |

## 24: FLANGER

This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter **OFF**: No filter is used **LPF**: Cuts the frequency range above the Cutoff Freq **HPF**: Cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the flanger sound (W) |
| Level | 0–127 | Output Level |

## 25: STEP FLANGR (STEP FLANGER)

This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | StepRate, Depth, Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter **OFF**: No filter is used **LPF**: Cuts the frequency range above the Cutoff Freq **HPF**: Cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Step Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| StepRate(Hz) | 0.10–20.00 Hz | Rate (period) of pitch change (Hz) |
| Step Rate ( ♪ ) | note (*1) | Rate (period) of pitch change (note) |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the flanger sound (W) |
| Level | 0–127 | Output Level |

## 26: HEXA-CHORUS

Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Pre Delay Deviat | 0–20 | Adjusts the differences in Pre Delay between each chorus sound. |
| Depth Deviation | -20– +20 | Adjusts the difference in modulation depth between each chorus sound. |

| Parameter | Value | Description |
|---|---|---|
| Pan Deviation | 0–20 | Adjusts the difference in stereo location between each chorus sound. **0**: All chorus sounds will be in the center. **20**: Each chorus sound will be spaced at 60 degree intervals relative to the center. |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the chorus sound (W) |
| Level | 0–127 | Output Level |

## 27: TREMOLO CHO (TREMOLO CHORUS)

This is a chorus effect with added Tremolo (cyclic modulation of volume).

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Depth, Cho Rate, Trm Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Cho Rate(Hz) | 0.05–10.00 Hz | Modulation frequency of the chorus effect (Hz) |
| Cho Rate ( ♪ ) | note (*1) | Modulation frequency of the chorus effect (note) |
| Chorus Depth | 0–127 | Modulation depth of the chorus effect |
| Treml Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Trm Rate(Hz) | 0.05–10.00 Hz | Modulation frequency of the tremolo effect (Hz) |
| Treml Rate ( ♪ ) | note (*1) | Modulation frequency of the tremolo effect (note) |
| Treml Separation | 0–127 | Spread of the tremolo effect |
| Treml Phase | 0–180 deg | Spread of the tremolo effect |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the tremolo chorus sound (W) |
| Level | 0–127 | Output Level |

## 28: SPACE-D

This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the chorus sound (W) |
| Level | 0–127 | Output Level |

## 29: 3D CHORUS

This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter **OFF**: No filter is used **LPF**: Cuts the frequency range above the Cutoff Freq **HPF**: Cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Modulation depth of the chorus effect |
| Phase | 0–180 deg | Spatial spread of the sound |
| Output Mode | SPEAKER, PHONES | Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select SPEAKER when using speakers, or PHONES when using headphones. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the chorus sound (W) |
| Level | 0–127 | Output Level |

## 30: 3D FLANGER

This applies a 3D effect to the flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter **OFF**: no filter is used **LPF**: cuts the frequency range above the Cutoff Freq **HPF**: cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |

| Parameter | Value | Description |
|---|---|---|
| Output Mode | SPEAKER, PHONES | Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select SPEAKER when using speakers, or PHONES when using headphones. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the flanger sound (W) |
| Level | 0–127 | Output Level |

## 31: 3D S.FLANGR (3D STEP FLANGER)

This applies a 3D effect to the step flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | StepRate, Depth, Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter **OFF**: No filter is used **LPF**: Cuts the frequency range above the Cutoff Freq **HPF**: Cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Step Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| StepRate(Hz) | 0.10–20.00 Hz | Rate (period) of pitch change (Hz) |
| Step Rate ( ♪ ) | note (*1) | Rate (period) of pitch change (note) |
| Output Mode | SPEAKER, PHONES | Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select SPEAKER when using speakers, or PHONES when using headphones. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the flanger sound (W) |
| Level | 0–127 | Output Level |

## 32: 2BND CHORUS (2BAND CHORUS)

A chorus effect that lets you apply an effect independently to the low-frequency and high-frequency ranges.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Low Depth, High Depth, Low Rate, HighRate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Split Freq | 200–8000 Hz | Frequency at which the low and high ranges will be divided |
| Low Pre Delay | 0.0–100.0 ms | Delay time from when the original sound is heard to when the low-range chorus sound is heard |
| Low Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Low Rate(Hz) | 0.05–10.00 Hz | Rate at which the low-range chorus sound is modulated (Hz) |
| Low Rate ( ♪ ) | note (*1) | Rate at which the low-range chorus sound is modulated (note) |
| Low Depth | 0–127 | Modulation depth for the low-range chorus sound |
| Low Phase | 0–180 deg | Spaciousness of the low-range chorus sound |
| High Pre Delay | 0.0–100.0 ms | Delay time from when the original sound is heard to when the high-range chorus sound is heard |
| High Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| HighRate(Hz) | 0.05–10.00 Hz | Rate at which the low-range chorus sound is modulated (Hz) |
| High Rate ( ♪ ) | note (*1) | Rate at which the low-range chorus sound is modulated (note) |
| High Depth | 0–127 | Modulation depth for the high-range chorus sound |
| High Phase | 0–180 deg | Spaciousness of the high-range chorus sound |
| Balance | D100:0W–D0:100W | Volume balance of the original sound (D) and chorus sound (W) |
| Level | 0–127 | Output volume |

## 33: 2BND FLANGR (2BAND FLANGER)

A flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Low Rate, HighRate, Low Feedback, High Feedback | |

| Parameter | Value | Description |
|---|---|---|
| Split Freq | 200–8000 Hz | Frequency at which the low and high ranges will be divided |
| Low Pre Delay | 0.0–100.0 ms | Delay time from when the original sound is heard to when the low-range flanger sound is heard |
| Low Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Low Rate(Hz) | 0.05–10.00 Hz | Rate at which the low-range flanger sound is modulated (Hz) |
| Low Rate ( ♪ ) | note (*1) | Rate at which the low-range flanger sound is modulated (note) |
| Low Depth | 0–127 | Modulation depth for the low-range flanger sound |
| Low Phase | 0–180 deg | Spaciousness of the low-range flanger sound |
| Low Feedback | -98– +98% | Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase) |

| Parameter | Value | Description |
|---|---|---|
| High Pre Delay | 0.0–100.0 ms | Delay time from when the original sound is heard to when the high-range flanger sound is heard |
| High Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| HighRate(Hz) | 0.05–10.00 Hz | Rate at which the high-range flanger sound is modulated (Hz) |
| High Rate ( ♪ ) | note (*1) | Rate at which the high-range flanger sound is modulated (note) |
| High Depth | 0–127 | Modulation depth for the high-range flanger sound |
| High Phase | 0–180 deg | Spaciousness of the high-range flanger sound |
| High Feedback | -98– +98% | Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase) |
| Balance | D100:0W–D0:100W | Volume balance of the original sound (D) and flanger sound (W) |
| Level | 0–127 | Output volume |

## 34: 2BND S.FLN (2BAND STEP FLANGER)

A step flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | LoStp Rt, HiStp Rt, Low Feedback, Hi Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Split Freq | 200–8000 Hz | Frequency at which the low and high ranges will be divided |
| Low Pre Delay | 0.0–100.0 ms | Delay time from when the original sound is heard to when the low-range flanger sound is heard |
| Low Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Low Rate(Hz) | 0.05–10.00 Hz | Rate at which the low-range flanger sound is modulated (Hz) |
| Low Rate ( ♪ ) | note (*1) | Rate at which the low-range flanger sound is modulated (note) |
| Low Depth | 0–127 | Modulation depth for the low-range flanger sound |
| Low Phase | 0–180 deg | Spaciousness of the low-range flanger sound |
| Low Feedback | -98– +98% | Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase) |
| LoStp Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| LoStp Rt(Hz) | 0.10–20.00 Hz | Rate at which the steps will cycle for the low-range flanger sound (Hz) |
| LoStp Rt( ♪ ) | note (*1) | Rate at which the steps will cycle for the low-range flanger sound (note) |
| Hi Pre Delay | 0.0–100.0 ms | Delay time from when the original sound is heard to when the high-range flanger sound is heard |
| Hi Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Hi Rate (Hz) | 0.05–10.00 Hz | Rate at which the high-range flanger sound is modulated (Hz) |
| Hi Rate ( ♪ ) | note (*1) | Rate at which the high-range flanger sound is modulated (note) |
| Hi Depth | 0–127 | Modulation depth for the high-range flanger sound |
| Hi Phase | 0–180 deg | Spaciousness of the high-range flanger sound |

| Parameter | Value | Description |
|---|---|---|
| Hi Feedback | -98– +98% | Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase) |
| HiStp Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| HiStp Rt(Hz) | 0.10–20.00 Hz | Rate at which the steps will cycle for the high-range flanger sound (Hz) |
| HiStp Rt( ♪ ) | note (*1) | Rate at which the steps will cycle for the high-range flanger sound (note) |
| Balance | D100:0W– D0:100W | Volume balance of the original sound (D) and flanger sound (W) |
| Level | 0–127 | Output volume |

## 35: OVERDRIVE

Creates a soft distortion similar to that produced by vacuum tube amplifiers.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Level, Amp Type, Drive, Pan | |

| Parameter | Value | Description |
|---|---|---|
| Drive | 0–127 | Degree of distortion Also changes the volume. |
| Amp Type | SMALL, BUILT-IN, 2-STACK, 3-STACK | Type of guitar amp **SMALL**: small amp **BUILT-IN**: single-unit type amp **2-STACK**: large double stack amp **3-STACK**: large triple stack amp |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Pan | L64–63R | Stereo location of the output sound |
| Level | 0–127 | Output Level |

## 36: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "35: OVERDRIVE."

## 37: VS OVRDRIVE (VS OVERDRIVE)

This is an overdrive that provides heavy distortion.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Level, Tone, Amp Type, Drive, Pan | |

| Parameter | Value | Description |
|---|---|---|
| Drive | 0–127 | Degree of distortion Also changes the volume. |
| Tone | 0–127 | Sound quality of the Overdrive effect |
| Amp Sw | OFF, ON | Turns the Amp Simulator on/off. |
| Amp Type | SMALL, BUILT-IN, 2-STACK, 3-STACK | Type of guitar amp **SMALL**: small amp **BUILT-IN**: single-unit type amp **2-STACK**: large double stack amp **3-STACK**: large triple stack amp |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Pan | L64–63R | Stereo location of the output sound |
| Level | 0–127 | Output Level |

## 38: VS DIST(VS DISTORTION)

This is a distortion effect that provides heavy distortion. The parameters are the same as for "37: VS OVERDRIVE."

## 39: GTR AMP SIM (GUITAR AMP SIMULATOR)

This is an effect that simulates the sound of a guitar amplifier.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Pre Amp Master, Pre Amp Volume, Pre Amp, Speaker | |

| Parameter | Value | Description |
|---|---|---|
| Pre Amp Sw | OFF, ON | Turns the amp switch on/off. |
| Pre Amp | JC-120, CLEAN TWIN, MATCH DRIVE, BG LEAD, MS1959I, MS1959II, MS1959I+II, SLDN LEAD, METAL5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ | Type of guitar amp |
| Pre Amp Volume | 0–127 | Volume and amount of distortion of the amp |
| Pre Amp Master | 0–127 | Volume of the entire pre-amp |
| Pre Amp Gain | LOW, MIDDLE, HIGH | Amount of pre-amp distortion |
| Pre Amp Bass Pre Amp Middle Pre Amp Treble | 0–127 | Tone of the bass/mid/treble frequency range * Middle cannot be set if "Match Drive" is selected as the Pre Amp Type. |
| Pre Amp Presence | 0–127 (MATCH DRIVE: -127 – 0) | Tone for the ultra-high frequency range |
| Pre Amp Bright | OFF, ON | Turning this "On" produces a sharper and brighter sound. * This parameter applies to the "JC-120," "Clean Twin," and "BG Lead" Pre Amp Types. |
| Speaker Sw | OFF, ON | Determines whether the signal passes through the speaker (ON), or not (OFF). |
| Speaker | (See the table below.) | Type of speaker |
| Mic Setting | 1, 2, 3 | Adjusts the location of the mic that's capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3, with the mic becoming more distant as the value increases. |
| Mic Level | 0–127 | Volume of the microphone |
| Direct Level | 0–127 | Volume of the direct sound |
| Pan | L64–63R | Stereo location of the output |
| Level | 0–127 | Output level |

### Specifications of each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

| Type | Cabinet | Speaker | Microphone |
|---|---|---|---|
| SMALL 1 | small open-back enclosure | 10 | dynamic |
| SMALL 2 | small open-back enclosure | 10 | dynamic |
| MIDDLE | open back enclosure | 12 x 1 | dynamic |
| JC-120 | open back enclosure | 12 x 2 | dynamic |

| Type | Cabinet | Speaker | Microphone |
|------|---------|---------|------------|
| BUILT-IN 1 | open back enclosure | 12 x 2 | dynamic |
| BUILT-IN 2 | open back enclosure | 12 x 2 | condenser |
| BUILT-IN 3 | open back enclosure | 12 x 2 | condenser |
| BUILT-IN 4 | open back enclosure | 12 x 2 | condenser |
| BUILT-IN 5 | open back enclosure | 12 x 2 | condenser |
| BG STACK 1 | sealed enclosure | 12 x 2 | condenser |
| BG STACK 2 | large sealed enclosure | 12 x 2 | condenser |
| MS STACK 1 | large sealed enclosure | 12 x 4 | condenser |
| MS STACK 2 | large sealed enclosure | 12 x 4 | condenser |
| METAL STACK | large double stack | 12 x 4 | condenser |
| 2-STACK | large double stack | 12 x 4 | condenser |
| 3-STACK | large triple stack | 12 x 4 | condenser |

## 40: COMPRESSOR

Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.

| | Assignable Parameters |
|---|---|
| MFX Control | Threshold, Attack, Level |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Attack | 0–127 | Sets the speed at which compression starts |
| Threshold | 0–127 | Adjusts the volume at which compression begins |
| Post Gain | 0– +18 dB | Adjusts the output gain. |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Level | 0–127 | Output level |

## 41: LIMITER

Compresses signals that exceed a specified volume level, preventing distortion from occurring.

| | Assignable Parameters |
|---|---|
| MFX Control | Threshold, Release, Level |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Release | 0–127 | Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied. |
| Threshold | 0–127 | Adjusts the volume at which compression begins |
| Ratio | 1.5:1, 2:1, 4:1, 100:1 | Compression ratio |
| Post Gain | 0– +18 dB | Adjusts the output gain. |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Level | 0–127 | Output level |

## 42: GATE

Cuts the reverb's delay according to the volume of the sound sent into the effect. Use this when you want to create an artificial-sounding decrease in the reverb's decay.

| | Assignable Parameters |
|---|---|
| MFX Control | Threshold, Hold, Release, Attack, Balance |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Threshold | 0–127 | Volume level at which the gate begins to close |
| Mode | GATE, DUCK | Type of gate<br>**GATE**: The gate will close when the volume of the original sound decreases, cutting the original sound.<br>**DUCK (Ducking)**: The gate will close when the volume of the original sound increases, cutting the original sound. |
| Attack | 0–127 | Adjusts the time it takes for the gate to fully open after being triggered. |
| Hold | 0–127 | Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold. |
| Release | 0–127 | Adjusts the time it takes the gate to fully close after the hold time. |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 43: DELAY

This is a stereo delay.

| | Assignable Parameters |
|---|---|
| MFX Control | Balance, Delay L, Delay R |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Delay L Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay L (ms) | 1–1300 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay L ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Delay R Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay R (ms) | 1–1300 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay R ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Phase Left Phase Right | NORMAL, INVERSE | Phase of the delay sound |
| Feedback Mode | NORMAL, CROSS | Selects the way in which delay sound is fed back into the effect. (See the figures above.) |
| Feedback | -98– +98 % | Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the delay sound (W) |
| Level | 0–127 | Output level |

## 44: LONG DELAY

A delay that provides a long delay time.

| | Assignable Parameters |
|---|---|
| MFX Control | Balance, Delay, Pan |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Delay time from when the original sound is heard to when the delay sound is heard (Hz) |

| Parameter | Value | Description |
|---|---|---|
| Delay ( ♪ ) | note (*1) | Delay time from when the original sound is heard to when the delay sound is heard (note) |
| Phase | NORMAL, INVERSE | Phase of the delay (**NORMAL**: non-inverted, **INVERT**: inverted) |
| Feedback | -98– +98% | Proportion of the delay sound that is to be returned to the input (negative values invert the phase) |
| HF Damp | 200–8000 Hz, BYPASS | Frequency at which the high-frequency content of the delayed sound will be cut (BYPASS: no cut) |
| Pan | L64–63R | Panning of the delay sound |
| Low Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| High Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| Balance | D100:0W–D0:100W | Volume balance of the original sound (D) and delay sound (W) |
| Level | 0–127 | Output volume |

## 45: SERIAL DLY (SERIAL DELAY)

This delay connects two delay units in series. Feedback can be applied independently to each delay unit, allowing you to produce complex delay sounds.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay1, Delay2, Pan | |

| Parameter | Value | Description |
|---|---|---|
| Delay1 Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay1 (ms) | 1–1300 ms | Delay time from when sound is input to delay 1 until the delay sound is heard (Hz) |
| Delay1 ( ♪ ) | note (*1) | Delay time from when sound is input to delay 1 until the delay sound is heard (note) |
| Delay1 Feedback | -98– +98% | Proportion of the delay sound that is to be returned to the input of delay 1 (negative values invert the phase) |
| Dly1 HF Damp | 200–8000 Hz, BYPASS | Frequency at which the high-frequency content of the delayed sound of delay 1 will be cut (BYPASS: no cut) |
| Delay2 Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay2 (ms) | 1–1300 ms | Delay time from when sound is input to delay 2 until the delay sound is heard (Hz) |
| Delay2 ( ♪ ) | note (*1) | Delay time from when sound is input to delay 2 until the delay sound is heard (note) |
| Delay2 Feedback | -98– +98% | Proportion of the delay sound that is to be returned to the input of delay 2 (negative values invert the phase) |
| Dly2 HF Damp | 200–8000 Hz, BYPASS | Frequency at which the high-frequency content of the delayed sound of delay 2 will be cut (BYPASS: no cut) |
| Pan | L64–63R | Panning of the delay sound |
| Low Gain | -15– +15 dB | Amount of boost/cut for the low-frequency range |
| High Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| Balance | D100:0W–D0:100W | Volume balance of the original sound (D) and delay sound (W) |
| Level | 0–127 | Output volume |

## 46: MOD DELAY (MODULATION DELAY)

Adds modulation to the delayed sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Depth, Delay L, Delay R | |

| Parameter | Value | Description |
|---|---|---|
| Delay L Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay L (ms) | 1–1300 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay L ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Delay R Mode | ms, note | Settings of the Delay R |
| Delay R (ms) | 1–1300 ms | The parameters are the same as for the Delay L. |
| Delay R ( ♪ ) | note (*1) | |
| Feedback Mode | NORMAL, CROSS | Selects the way in which delay sound is fed back into the effect (See the figures above.) |
| Feedback | -98– +98 % | Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the delay sound (W) |
| Level | 0–127 | Output level |

## 47: 3TP PAN DLY (3TAP PAN DELAY)

Produces three delay sounds; center, left and right.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay C, Delay L, Delay R | |

| Parameter | Value | Description |
|---|---|---|
| Delay L Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay L (ms) | 1–2600 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay L ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Delay R Mode | ms, note | Settings of the Delay R |
| Delay R (ms) | 1–2600 ms | The parameters are the same as for the Delay L. |
| Delay R ( ♪ ) | note (*1) | |
| Delay C Mode | ms, note | Settings of the Delay C |
| Delay C (ms) | 1–2600 ms | The parameters are the same as for the Delay L. |
| Delay C ( ♪ ) | note | |
| Center Feedback | -98– +98 % | Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS. |
| Left Level | 0–127 | Volume of each delay |

| Parameter | Value | Description |
|---|---|---|
| Right Level | 0–127 | Volume of each delay |
| Center Level | 0–127 | Volume of each delay |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the delay sound (W) |
| Level | 0–127 | Output level |

## 48: 4TP PAN DLY (4TAP PAN DELAY)

This effect has four delays.

**Stereo location of each delay**



|  | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay1, Delay2, Delay3, Delay4 | |

| Parameter | Value | Description |
|---|---|---|
| Delay1 Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay1 (ms) | 1–2600 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay1 ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Delay2 Mode | ms, note | Settings of the Delay 2 |
| Delay2 (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay2 ( ♪ ) | note (*1) | |
| Delay3 Mode | ms, note | Settings of the Delay 3 |
| Delay3 (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay3 ( ♪ ) | note (*1) | |
| Delay4 Mode | ms, note | Settings of the Delay 4 |
| Delay4 (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay4 ( ♪ ) | note (*1) | |
| Delay1 Feedback | -98– +98 % | Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS. |
| Delay1 Level | 0–127 | Volume of each delay |
| Delay2 Level | | |
| Delay3 Level | | |
| Delay4 Level | | |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the delay sound (W) |
| Level | 0–127 | Output level |

## 49: MULTTAP DLY (MULTI TAP DELAY)

This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.

|  | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay1, Delay2, Delay3, Delay4 | |

| Parameter | Value | Description |
|---|---|---|
| Delay1 Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay1 (ms) | 1–2600 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay1 ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Delay2 Mode | ms, note | Settings of the Delay 2 |
| Delay2 (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay2 ( ♪ ) | note (*1) | |
| Delay3 Mode | ms, note | Settings of the Delay 3 |
| Delay3 (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay3 ( ♪ ) | note (*1) | |
| Delay4 Mode | ms, note | Settings of the Delay 4 |
| Delay4 (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay4 ( ♪ ) | note (*1) | |
| Delay1 Feedback | -98– +98 % | Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any the high frequencies, set this parameter to BYPASS. |
| Delay1 Pan | L64–63R | Stereo location |
| Delay2 Pan | L64–63R | |
| Delay3 Pan | L64–63R | |
| Delay4 Pan | L64–63R | |
| Delay1 Level | 0–127 | Output level of Delays 1 |
| Delay2 Level | 0–127 | Output level of Delays 2 |
| Delay3 Level | 0–127 | Output level of Delays 3 |
| Delay4 Level | 0–127 | Output level of Delays 4 |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 50: REVERSE DLY (REVERSE DELAY)

This is a reverse delay that adds a reversed and delayed sound to the input sound. A tap delay is connected immediately after the reverse delay.

|  | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Rev Dly, Rev Dly Pan | |

| Parameter | Value | Description |
|---|---|---|
| Threshold | 0–127 | Volume at which the reverse delay will begin to be applied |
| Rev Dly Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rev Dly (ms) | 1–1300 ms | Delay time from when sound is input into the reverse delay until the delay sound is heard (Hz) |
| Rev Dly ( ♪ ) | note (*1) | Delay time from when sound is input into the reverse delay until the delay sound is heard (note) |
| Rev Dly Fbk | -98– +98% | Proportion of the delay sound that is to be returned to the input of the reverse delay (negative values invert the phase) |

| Parameter | Value | Description |
|---|---|---|
| Rev Dly HFDmp | 200–8000 Hz, BYPASS | Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut) |
| Rev Dly Pan | L64–63R | Panning of the reverse delay sound |
| Rev Dly Level | 0–127 | Volume of the reverse delay sound |
| Delay1 Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay1 (ms) | 1–1300 ms | Delay time from when sound is input into the tap delay until the delay sound is heard (Hz) |
| Delay1 ( ♪ ) | note (*1) | Delay time from when sound is input into the tap delay until the delay sound is heard (note) |
| Delay2 Mode | ms, note | Settings of the Delay 2 |
| Delay2 (ms) | 1–1300 ms | The parameters are the same as for the Delay 1. |
| Delay2 ( ♪ ) | note (*1) | |
| Delay3 Mode | ms, note | Settings of the Delay 3 |
| Delay3 (ms) | 1–1300 ms | The parameters are the same as for the Delay 1. |
| Delay3 ( ♪ ) | note (*1) | |
| Delay3 Feedback | -98– +98% | Proportion of the delay sound that is to be returned to the input of the tap delay (negative values invert the phase) |
| Delay HF Damp | 200–8000 Hz, BYPASS | Frequency at which the low-frequency content of the tap delay sound will be cut (BYPASS: no cut) |
| Delay1 Pan Delay2 Pan | L64–63R | Panning of the tap delay sounds |
| Delay1 Level Delay2 Level | 0–127 | Volume of the tap delay sounds |
| Low Gain | -15– +15 dB | Amount of boost/cut for the low-frequency range |
| High Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| Balance | D100:0W– D0:100W | Volume balance of the original sound (D) and delay sound (W) |
| Level | 0–127 | Output volume |

## 51: SHUFFLE DLY (SHUFFLE DELAY)

Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay, Shuffle Rate | |

| Parameter | Value | Description |
|---|---|---|
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the time until the delay sound is heard. (note) |
| Shuffle Rate | 0–100 % | Adjusts the ratio (as a percentage) of the time that elapses before Delay B sounds relative to the time that elapses before the Delay A sounds. When set to 100%, the delay times are the same. |
| Acceleration | 0–15 | Adjusts the time over which the Delay Time changes from the current setting to its specified new setting. |
| Feedback | -98– +98 % | Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |

| Parameter | Value | Description |
|---|---|---|
| Pan A Pan B | L64–63R | Stereo location of Delay A/B |
| Level A Level B | 0–127 | Volume of delay A/B |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 52: 3D DELAY

This applies a 3D effect to the delay sound. The delay sound will be positioned 90 degrees left and 90 degrees right.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay C, Delay L, Delay R | |

| Parameter | Value | Description |
|---|---|---|
| Delay L Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay L (ms) | 1–2600 ms | Adjusts the delay time from the direct sound until the delay sound is heard. (Hz) |
| Delay L ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the delay sound is heard. (note) |
| Delay R Mode | ms, note | Settings of the Delay R |
| Delay R (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay R ( ♪ ) | note (*1) | |
| Delay C Mode | ms, note | Settings of the Delay C |
| Delay C (ms) | 1–2600 ms | The parameters are the same as for the Delay 1. |
| Delay C ( ♪ ) | note (*1) | |
| Center Feedback | -98– +98 % | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Left Level Right Level Center Level | 0–127 | Output level of the delay sound |
| Output Mode | SPEAKER, PHONES | Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select SPEAKER when using speakers, or PHONES when using headphones. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output Level |

## 53: T-CTRL DLY(TIME CTRL DELAY)

A stereo delay in which the delay time can be varied smoothly.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay | |

| Parameter | Value | Description |
|---|---|---|
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–1300 ms | Adjusts the time until the delay is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the time until the delay is heard. (note) |
| Acceleration | 0–15 | Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change. |
| Feedback | -98– +98 % | Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS. |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the delay sound (W) |
| Level | 0–127 | Output level |

## 54: LONG TC DLY
## (LONG TIME CTRL DELAY)

A delay in which the delay time can be varied smoothly, and allowing an extended delay to be produced.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Delay | |

| Parameter | Value | Description |
|---|---|---|
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Adjusts the time until the delay is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the time until the delay is heard. (note) |
| Acceleration | 0–15 | Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change. |
| Feedback | -98– +98 % | Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS. |
| Pan | L64–63R | Stereo location of the delay |
| Low Gain | -15– +15 dB | Gain of the low frequency range |
| High Gain | -15– +15 dB | Gain of the high frequency range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the delay sound (W) |
| Level | 0–127 | Output level |

## 55: TAPE ECHO

A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Echo Level, Repeat Rate, Mode | |

| Parameter | Value | Description |
|---|---|---|
| Mode | S, M, L, S+M, S+L, M+L, S+M+L | Combination of playback heads to use Select from three different heads with different delay times. **S**: short **M**: middle **L**: long |
| Repeat Rate | 0–127 | Tape speed Increasing this value will shorten the spacing of the delayed sounds. |
| Intensity | 0–127 | Amount of delay repeats |
| Bass | -15– +15 dB | Boost/cut for the lower range of the echo sound |
| Treble | -15– +15 dB | Boost/cut for the upper range of the echo sound |
| Head S Pan Head M Pan Head L Pan | L64–63R | Independent panning for the short, middle, and long playback heads |
| Tape Distortion | 0–5 | Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion. |
| W/F Rate | 0–127 | Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity) |
| W/F Depth | 0–127 | Depth of wow/flutter |
| Echo Level | 0–127 | Volume of the echo sound |
| Direct Level | 0–127 | Volume of the original sound |
| Level | 0–127 | Output level |

## 56: LOFI NOISE

In addition to a lo-fi effect, this adds various types of noise such as white noise and disc noise.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Hum Noise Level, Disc Noise Level, Noise Level, LoFi Type | |

| Parameter | Value | Description |
|---|---|---|
| LoFi Type | 1–9 | Degrades the sound quality. The sound quality grows poorer as this value is increased. |
| Post Fltr Type | OFF, LPF, HPF | Type of filter **OFF**: no filter is used **LPF**: cuts the frequency range above the Cutoff **HPF**: cuts the frequency range below the Cutoff |
| Post F-Cutoff | 200–8000 Hz | Center frequency of the filter |
| Noise Type | WHITE, PINK | Switch between white noise and pink noise. |
| Noise LPF | 200–8000 Hz, BYPASS | Center frequency of the low pass filter applied to the white/pink noise (BYPASS: no cut) |
| Noise Level | 0–127 | Volume of the white/pink noise |
| Disc Noise Type | LP, EP, SP, RND | Type of record noise The frequency at which the noise is heard depends on the selected type. |
| DiscNoise LPF | 200–8000 Hz, BYPASS | Adjusts the cutoff frequency of the low pass filter applied to the record noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |

| Parameter | Value | Description |
|---|---|---|
| Disc Noise Level | 0–127 | Volume of the record noise |
| Hum Noise Type | 50 Hz, 60 Hz | Frequency of the hum noise |
| Hum Noise LPF | 200–8000 Hz, BYPASS | Center frequency of the low pass filter applied to the hum noise (BYPASS: no cut) |
| Hum Noise Level | 0–127 | Volume of the hum noise |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 57: LOFI COMPRS (LOFI COMPRESS)

This is an effect that intentionally degrades the sound quality for creative purposes.

| | Assignable Parameters |
|---|---|
| MFX Control | Balance, LoFi Type |

| Parameter | Value | Description |
|---|---|---|
| Pre Filter Type | 1–6 | Selects the type of filter applied to the sound before it passes through the Lo-Fi effect. |
| LoFi Type | 1–9 | Degrades the sound quality. The sound quality grows poorer as this value is increased. |
| Post Fltr Type | OFF, LPF, HPF | Type of filter<br>**OFF**: no filter is used<br>**LPF**: cuts the frequency range above the Cutoff<br>**HPF**: cuts the frequency range below the Cutoff |
| Post F-Cutoff | 200–8000 Hz | Basic frequency of the Post Filter |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 58: LOFI RADIO

In addition to a Lo-Fi effect, this effect also generates radio noise.

| | Assignable Parameters |
|---|---|
| MFX Control | Balance, Radio Detune, Radio Noise Lev, LoFi Type |

| Parameter | Value | Description |
|---|---|---|
| LoFi Type | 1–9 | Degrades the sound quality. The sound quality grows poorer as this value is increased. |
| Post Fltr Type | OFF, LPF, HPF | Type of filter<br>**OFF**: no filter is used<br>**LPF**: cuts the frequency range above the Cutoff<br>**HPF**: cuts the frequency range below the Cutoff |
| Post F-Cutoff | 200–8000 Hz | Basic frequency of the Post Filter |
| Radio Detune | 0–127 | Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further. |
| Radio Noise Lev | 0–127 | Volume of the radio noise |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 59: TELEPHONE

| | Assignable Parameters |
|---|---|
| MFX Control | Balance, Voice Quality |

| Parameter | Value | Description |
|---|---|---|
| Voice Quality | 0–15 | Audio quality of the telephone voice |
| Treble | -15– +15 dB | Bandwidth of the telephone voice |
| Balance | D100:0–D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 60: PHONOGRAPH

Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.

| | Assignable Parameters |
|---|---|
| MFX Control | Total Noise Lev, Total W/F, Frequency Range, Balance |

| Parameter | Value | Description |
|---|---|---|
| Signal Dist | 0–127 | Depth of distortion |
| Frequency Range | 0–127 | Frequency response of the playback system<br>Decreasing this value will produce the impression of an old system with a poor frequency response. |
| Disc Type | LP, EP, SP | Rotational speed of the turntable<br>This will affect the frequency of the scratch noise. |
| ScratchNoise Lev | 0–127 | Amount of noise due to scratches on the record |
| Dust Noise Lev | 0–127 | Volume of noise due to dust on the record |
| Hiss Noise Lev | 0–127 | Volume of continuous "hiss" |
| Total Noise Lev | 0–127 | Volume of overall noise |
| Wow | 0–127 | Depth of long-cycle rotational irregularity |
| Flutter | 0–127 | Depth of short-cycle rotational irregularity |
| Random | 0–127 | Depth of indefinite-cycle rotational irregularity |
| Total W/F | 0–127 | Depth of overall rotational irregularity |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the effect sound (W) |
| Level | 0–127 | Output level |

## 61: PCH SHIFTER (PITCH SHIFTER)

A stereo pitch shifter.

| | Assignable Parameters |
|---|---|
| MFX Control | Balance, Fine, Coarse, Delay |

| Parameter | Value | Description |
|---|---|---|
| Coarse | -24– +12 semi | Adjusts the pitch of the pitch shifted sound in semitone steps. |
| Fine | -100– +100 cent | Adjusts the pitch of the pitch shifted sound in 2-cent steps. |
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–1300 ms | Adjusts the delay time from the direct sound until the pitch shifted sound is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the pitch shifted sound is heard. (note) |

| Parameter | Value | Description |
|---|---|---|
| Feedback | -98– +98 % | Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the pitch shifted sound (W) |
| Level | 0–127 | Output Level |

## 62: 2V P.SHIFTR (2VOICE PITCH SHIFTER)

Shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the original sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance, Pch1 Coarse, Pch2 Coarse, Pch1 Dly, Pch2 Dly | |

| Parameter | Value | Description |
|---|---|---|
| Pch1 Coarse | -24–+12 semi | Adjusts the pitch of Pitch Shift 1 in semitone steps. |
| Pch1 Fine | -100–+100 cent | Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps. |
| Pch1 Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Pch1 Dly (ms) | 1–1300 ms | Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard. (Hz) |
| Pch1 Delay ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard. (note) |
| Pch1 Feedback | -98– +98 % | Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Pch1 Pan | L64–63R | Stereo location of the Pitch Shift 1 sound |
| Pch1 Level | 0–127 | Volume of the Pitch Shift1 sound |
| Pch2 Coarse | -24–+12 semi | Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound. |
| Pch2 Fine | -100–+100 cent | |
| Pch2 Delay Mode | ms, note | |
| Pch2 Dly (ms) | 1–1300 ms | |
| Pch2 Delay ( ♪ ) | note (*1) | |
| Pch2 Feedback | -98– +98 % | |
| Pch2 Pan | L64–63R | |
| Pch2 Level | 0–127 | |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the pitch shifted sound (W) |
| Level | 0–127 | Output Level |

## 63: S.P.SHIFTER (STEP PITCH SHIFTER)

A pitch shifter in which the amount of pitch shift is varied by a 16-step sequence.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Attack, Gate Time, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Step 01–16 | -24–+12 semi | Amount of pitch shift at each step (semitone units) |

| Parameter | Value | Description |
|---|---|---|
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Rate at which the 16-step sequence will cycle (Hz) |
| Rate ( ♪ ) | note (*1) | Rate at which the 16-step sequence will cycle (note) |
| Attack | 0–127 | Speed at which the amount of pitch shift changes between steps |
| Gate Time | 0–127 | Duration of the pitch shifted sound at each step |
| Fine | -100– +100 cent | Pitch shift adjustment for all steps (2-cent units) |
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–1300 ms | Delay time from the original sound until the pitch-shifted sound is heard (Hz) |
| Delay ( ♪ ) | note (*1) | Delay time from the original sound until the pitch-shifted sound is heard (note) |
| Feedback | -98– +98% | Proportion of the pitch-shifted sound that is to be returned to the input (negative values invert the phase) |
| Low Gain | -15– +15 dB | Amount of boost/cut for the low-frequency range |
| High Gain | -15– +15 dB | Amount of boost/cut for the high-frequency range |
| Balance | D100:0W– D0:100W | Volume balance of the original sound (D) and pitch-shifted sound (W) |
| Level | 0–127 | Output volume |

## 64: REVERB

Adds reverberation to the sound, simulating an acoustic space.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Time, Type, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Type | ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2 | Type of reverb<br>**ROOM1**: dense reverb with short decay<br>**ROOM2**: sparse reverb with short decay<br>**STAGE1**: reverb with greater late reverberation<br>**STAGE2**: reverb with strong early reflections<br>**HALL1**: reverb with clear reverberance<br>**HALL2**: reverb with rich reverberance |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the reverb sound is heard. |
| Time | 0–127 | Time length of reverberation |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W– D0:100W | Volume balance between the direct sound (D) and the reverb sound (W) |
| Level | 0–127 | Output Level |

# 65: GATED REV (GATED REVERB)

This is a special type of reverb in which the reverberant sound is cut off before its natural length.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance | |

| Parameter | Value | Description |
|---|---|---|
| Type | NORMAL, REVERSE, SWEEP1, SWEEP2 | Type of reverb<br>**NORMAL**: conventional gated reverb<br>**REVERSE**: backwards reverb<br>**SWEEP1**: the reverberant sound moves from right to left<br>**SWEEP2**: the reverberant sound moves from left to right |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the reverb sound is heard. |
| Gate Time | 5–500 ms | Adjusts the time from when the reverb is heard until it disappears. |
| Low Gain | -15– +15 dB | Gain of the low range |
| High Gain | -15– +15 dB | Gain of the high range |
| Balance | D100:0W–D0:100W | Volume balance between the direct sound (D) and the reverb sound (W) |
| Level | 0–127 | Output Level |

# 66: OVDRV→CHO (OVERDRIVE→CHORUS)

This effect connects an overdrive and a chorus in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Bal, Cho Rate, Chorus Depth, Overdrive Drive | |

| Parameter | Value | Description |
|---|---|---|
| Overdrive Drive | 0–127 | Degree of distortion<br>Also changes the volume. |
| Overdrive Pan | L64–63R | Stereo location of the overdrive sound |
| Chorus PreDly | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Cho Rate(Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Cho Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Chorus Depth | 0–127 | Depth of modulation |
| Chorus Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |
| Level | 0–127 | Output Level |

# 67: OVDRV→FLNGR (OVERDRIVE→FLANGER)

This effect connects an overdrive and a flanger in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Flngr Bal, Fln Rate, Flngr Depth, Flngr Feedback, Overdrive Drive | |

| Parameter | Value | Description |
|---|---|---|
| Overdrive Drive | 0–127 | Degree of distortion<br>Also changes the volume. |
| Overdrive Pan | L64–63R | Stereo location of the overdrive sound |
| Flngr PreDly | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Flngr Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |

| Parameter | Value | Description |
|---|---|---|
| Fln Rate(Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Fln Rate( ♪ ) | note (*1) | Frequency of modulation (note) |
| Flngr Depth | 0–127 | Depth of modulation |
| Flngr Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| Level | 0–127 | Output Level |

# 68: OVDRV→DELAY (OVERDRIVE→DELAY)

This effect connects an overdrive and a delay in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Delay Bal, Overdrive Drive | |

| Parameter | Value | Description |
|---|---|---|
| Overdrive Drive | 0–127 | Degree of distortion<br>Also changes the volume. |
| Overdrive Pan | L64–63R | Stereo location of the overdrive sound |
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Adjusts the delay time from the direct sound until the delay sound is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the delay sound is heard. (note) |
| Delay Feedback | -98– +98 % | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Delay Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D). |
| Level | 0–127 | Output Level |

# 69: DIST→CHORUS (DISTORTION→CHORUS)

The parameters are essentially the same as in "66: OVERDRIVE → CHORUS," with the exception of the following two.

Overdrive Drive→Distortion Drive

Overdrive Pan→Distortion Pan

# 70: DIST→FLANGR (DISTORTION→FLANGER)

The parameters are essentially the same as in "67: OVERDRIVE → FLANGER," with the exception of the following two.

Overdrive Drive→Distortion Drive

Overdrive Pan→Distortion Pan

## 71: DIST→DELAY (DISTORTION→DELAY)

The parameters are essentially the same as in "68: OVERDRIVE→DELAY," with the exception of the following two.

Overdrive Drive→Distortion Drive

Overdrive Pan→Distortion Pan

## 72: ENH→CHORUS (ENHANCER→CHORUS)

This effect connects an enhancer and a chorus in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Bal, Chorus Depth, Cho Rate, Enhancer Sens | |

| Parameter | Value | Description |
|---|---|---|
| Enhancer Sens | 0–127 | Sensitivity of the enhancer |
| Enhancer Mix | 0–127 | Level of the overtones generated by the enhancer |
| Chorus PreDly | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Cho Rate(Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Cho Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Chorus Depth | 0–127 | Depth of modulation |
| Chorus Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |
| Level | 0–127 | Output Level |

## 73: ENH→FLANGER (ENHANCER→FLANGER)

This effect connects an enhancer and a flanger in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Flngr Bal, Fln Rate, Flngr Depth, Flngr Feedback, Enhancer Sens | |

| Parameter | Value | Description |
|---|---|---|
| Enhancer Sens | 0–127 | Sensitivity of the enhancer |
| Enhancer Mix | 0–127 | Level of the overtones generated by the enhancer |
| Flngr PreDly | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Flngr Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Fln Rate(Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Fln Rate( ♪ ) | note (*1) | Frequency of modulation (note) |
| Flngr Depth | 0–127 | Depth of modulation |
| Flngr Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| Level | 0–127 | Output Level |

## 74: ENH→DELAY (ENHANCER→DELAY)

This effect connects an enhancer and a delay in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Delay Bal, Enhancer Sens | |

| Parameter | Value | Description |
|---|---|---|
| Enhancer Sens | 0–127 | Sensitivity of the enhancer |
| Enhancer Mix | 0–127 | Level of the overtones generated by the enhancer |
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Adjusts the delay time from the direct sound until the delay sound is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the delay sound is heard. (note) |
| Delay Feedback | -98– +98 % | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Delay Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D). |
| Level | 0–127 | Output Level |

## 75: CHO→DELAY (CHORUS→DELAY)

This effect connects a chorus and a delay in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Delay Bal, Chorus Bal, Chorus Depth, Cho Rate | |

| Parameter | Value | Description |
|---|---|---|
| Chorus PreDly | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Cho Rate(Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Cho Rate ( ♪ ) | note (*1) | Frequency of modulation (note) |
| Chorus Depth | 0–127 | Depth of modulation |
| Chorus Bal | D100:0W–D0:100W | Volume balance between the direct sound (D) and the chorus sound (W) |
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Adjusts the delay time from the direct sound until the delay sound is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the delay sound is heard. (note) |
| Delay Feedback | -98– +98 % | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |

| Parameter | Value | Description |
|---|---|---|
| Delay Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D). |
| Level | 0–127 | Output Level |

## 76: FLN→DELAY (FLANGER→DELAY)

This effect connects a flanger and a delay in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Delay Bal, Flngr Bal, Fln Rate, Flngr Feedback | |

| Parameter | Value | Description |
|---|---|---|
| Flngr PreDly | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Flngr Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Fln Rate(Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Fln Rate( ♪ ) | note (*1) | Frequency of modulation (note) |
| Flngr Depth | 0–127 | Depth of modulation |
| Flngr Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Volume balance between the direct sound (D) and the flanger sound (W) |
| Delay Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay (ms) | 1–2600 ms | Adjusts the delay time from the direct sound until the delay sound is heard. (Hz) |
| Delay ( ♪ ) | note (*1) | Adjusts the delay time from the direct sound until the delay sound is heard. (note) |
| Delay Feedback | -98– +98 % | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Delay Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D). |
| Level | 0–127 | Output Level |

## 77: CHO→FLANGER (CHORUS→FLANGER)

This effect connects a chorus and a flanger in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Bal, Flngr Bal, Chorus Depth, Cho Rate, Fln Rate, Flngr Feedback | |

| Parameter | Value | Description |
|---|---|---|
| Chorus PreDly | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Cho Rate(Hz) | 0.05–10.00 Hz | Modulation frequency of the chorus effect (Hz) |
| Cho Rate ( ♪ ) | note (*1) | Modulation frequency of the chorus effect (note) |
| Chorus Depth | 0–127 | Modulation depth of the chorus effect |
| Chorus Bal | D100:0W–D0:100W | Volume balance between the direct sound (D) and the chorus sound (W) |
| Flngr PreDly | 0.0–100.0 ms | Adjusts the delay time from when the direct sound begins until the flanger sound is heard. |
| Flngr Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Fln Rate(Hz) | 0.05-10.00 Hz | Modulation frequency of the flanger effect (Hz) |
| Fln Rate( ♪ ) | note (*1) | Modulation frequency of the flanger effect (note) |
| Flngr Depth | 0-127 | Modulation depth of the flanger effect |
| Flngr Feedback | -98– +98 % | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| Level | 0–127 | Output Level |

## 78: SYM.RESONCE (SYMPATHETIC RESONANCE)

On an acoustic piano, holding down the damper pedal allows other strings to resonate in sympathy with the notes you play, creating rich and spacious resonances. This effect simulates these sympathetic resonances.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Damper, P-Sft Amount, P-Sft Level | |

| Parameter | Value | Description |
|---|---|---|
| Depth | 0–10 | Depth of the effect |
| Damper | 0–127 | Depth to which the damper pedal is pressed (controls the resonant sound) |
| Pre LPF | 16–15000 Hz, BYPASS | Frequency of the filter that cuts the high-frequency content of the input sound (BYPASS: no cut) |
| Pre HPF | BYPASS, 16–15000 Hz | Frequency of the filter that cuts the low-frequency content of the input sound (BYPASS: no cut) |
| Peaking Freq | 200–8000 Hz | Frequency of the filter that boosts/cuts a specific frequency region of the input sound |
| Peaking Gain | -15– +15 dB | Amount of boost/cut produced by the filter at the specified frequency region of the input sound |
| Peaking Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Width of the frequency region boosted/cut by the `Peaking Gain' parameter (larger values make the region narrower) |
| HF Damp | 16–15000 Hz, BYPASS | Frequency at which the high-frequency content of the resonant sound will be cut (BYPASS: no cut) |
| LF Damp Freq | BYPASS, 16–15000 Hz | Frequency at which the low-frequency content of the resonant sound will be cut (BYPASS: no cut) |
| Level | 0–127 | Output Level |
| P-Sft Amount | 0–10 | Amount of resonance |
| P-Sft Level | 0–10 | Volume level of the resonant component |
| P-Sft LPF | 16–15000 Hz, BYPASS | Basic frequency at which the filter cuts the high-frequency portion of the resonant component (BYPASS: no cut) |
| P-Sft HPF | BYPASS, 16–15000 Hz | Basic frequency at which the filter cuts the low-frequency portion of the resonant component (BYPASS: no cut) |

| Parameter | Value | Description |
|---|---|---|
| P-Sft to Rev | 0–127 | Volume of additional resonance added to resonant component |
| Damper offset | 0–64 | As the value is increased, more of a slight resonance is added to the sound, even when the damper pedal is not pressed |

## 79: PIANO EFX (PIANO EFFECTS)

This effect enhances the realism of piano tones used with One Touch Piano.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Lid, Piano Ambience, Mic Type, Mic Distance | |

| Parameter | Value | Description |
|---|---|---|
| Lid | 1–6 | This reproduces the change in sound that occurs when a grand piano's lid is raised or lowered. |
| Mic Distance | 0–10 | This sets the apparent distance of the microphone used in recording the piano's sound |
| Mic Type | OFF, CONDENSER, DYNAMIC | This sets the kind of the microphone used in recording the piano's sound |
| EQ Switch | OFF, ON | Equalizer switch |
| EQ Mid Freq | 100–4000Hz | Equalizer's basic frequency |
| EQ Mid Gain | -12.0–+12.0 dB | Amount of boost or cut from the equalizer |
| EQ Mid Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Equalizer bandwidth (bandwidth narrows as value is increased) |
| Piano Ambience | 0–5 | Piano reverberation |
| Level | 0–127 | Output volume |

## 80: E.PIANO EFX (E. PINO EFFECTS)

This effect enhances the realism of elctric piano tones used with One Touch E.Piano.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Tone Control, Amp Type | |

| Parameter | Value | Description |
|---|---|---|
| Tone Control | 0–127 | With 64 as the reference value, increasing the value boosts the high end, while lowering the value boosts the low end. |
| Amp Type | OFF, EP-AMP, GTR-AMP | Amp Type |
| EQ Switch | OFF, ON | Equalizer switch |
| EQ Mid Freq | 100–4000Hz | Equalizer's basic frequency |
| EQ Mid Gain | -12.0–+12.0 dB | Amount of boost or cut from the equalizer |
| EQ Mid Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Equalizer bandwidth (bandwidth narrows as value is increased) |
| Level | 0–127 | Output volume |

## 81: VR CHORUS

This chorus is a descendant of the Roland VR Series effects.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Depth, Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100 ms | Amount of time that it is to take for the chorus sound to be produced after the original sound has sounded. |
| Rate Mode | Hz, Note | When this is set to "note," the effect is synchronized with the tempo. |

| Parameter | Value | Description |
|---|---|---|
| Rate (Hz) | 0.05–10.00 Hz | Modulation rate (Hz) |
| Rate ( ♪ ) | note (*1) | Modulation rate (note) |
| Depth | 0–127 | Modulation Depth |
| Phase | 0–180 deg | Amount of breadth in the chorus sound |
| Balance | D100:0W–D0:100W | Volume balance between the original, dry sound (D) and the chorus sound (W) |
| Level | 0–127 | Output volume |

## 82: VR TREMOLO

This tremolo is a descendant of the Roland VR Series effects. This changes the volume level in a cyclic manner.

Switching between the Mono and Stereo Tremolo Type settings also switches the volume control waveform.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Depth, Tremolo Type | |

| Parameter | Value | Description |
|---|---|---|
| Tremolo Type | Mono, Stereo | **Mono:** The left and right volume levels change simultaneously. **Stereo:** The left and right volume levels change in alternating fashion. |
| Rate Mode | Hz, Note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency at which the effect is applied (Hz) |
| Rate ( ♪ ) | note (*1) | Frequency at which the effect is applied (note) |
| Depth | 0–127 | Depth of the effect |
| Low Gain | -15–+15 dB | Boost or cut in the low end |
| High Gain | -15–+15 dB | Boost or cut in the high end |
| Level | 0–127 | Output volume |

## 83: VR AUTO WAH

This wah is a descendant of the Roland VR Series effects. This is a special wah effect (an effect in which the tone is changed cyclically) produced by shifting the filter in a cyclic fashion.

You can switch the Control Type parameter to select from Auto Wah, Touch Wah, or Pedal Wah.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Depth, Peak, Manual | |

| Parameter | Value | Description |
|---|---|---|
| Control Type | MOD, TOUCH, PEDAL | **Effect Control Types** **MOD:** The tone changes at the set rate. **TOUCH:** The tone changes in response to changes in the volume. **PEDAL:** The tone changes according to the function of the Manual parameter. Can be used as a pedal wah. |
| Filter Type | LPF, BPF | **Filter Type** **LPF:** Produces a wah effect over a wide frequency range. **BPF:** Produces a wah effect over a narrow frequency range. |
| Manual | 0–127 | When Control Type is set to "PEDAL," you can use this parameter to change the tone. |
| Peak | 0–127 | Wah effect bandwidth The bandwidth narrows as the value is increased. |
| Rate Mode | Hz, Note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Wah effect rate |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Rate ( ♪ ) | note (*1) | Wah effect rate (note) When Control Type is set to "TOUCH," this adjusts the sensitivity to the volume used in changing the tone. |
| Depth | 0–127 | Depth of the wah effect's sweep |
| Phase | 0–180 deg | Ratio of the wah effect sound in the left and right sides when the spread is not distributed evenly |
| Low Gain | -15–+15 dB | Boost or cut in the low end |
| High Gain | -15–+15 dB | Boost or cut in the high end |
| Level | 0–127 | Output volume |

**TIP**

**Settings when using a pedal wah with a pedal connected to FC1**

- MFX Control: Manual
- Control Type: PEDAL
- EDIT/ 2. Control/ FC1: MFX Control

## 84: VR PHASER

This phaser is a descendant of the Roland VR Series effects. This creates a swirling effect by adding sounds that are out of phase with the original sound.

| | Assignable Parameters |
|---|---|
| MFX Control | Rate, Resonance, Depth |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Rate Mode | Hz, Note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Phaser Frequency (Hz) |
| Rate ( ♪ ) | note (*1) | Phaser Frequency (note) |
| Depth | 0–127 | Depth |
| Resonance | 0–127 | Feedback Level |
| Step Sw | OFF, ON | Setting this to ON creates a step phaser. |
| Step Rate Mode | Hz, Note | When this is set to "note," the effect is synchronized with the tempo. |
| StepRate(Hz) | 0.10–20.00 Hz | Rate of stepped changes in phaser effect (Hz) |
| Step Rate ( ♪ ) | note (*1) | Rate of stepped changes in phaser effect (note) |
| Low Gain | -15–+15 dB | Boost or cut in the low end |
| High Gain | -15–+15 dB | Boost or cut in the high end |
| Level | 0–127 | Output volume |

## 85: ORGAN MULTI

This is an effect combining the VK series internal effect with an organ effect with the same features.
It comprises vibrato/chorus, overdrive, and rotary effects.

| | Assignable Parameters |
|---|---|
| MFX Control | Rotary Speed, OD Drive |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Vib/Cho Switch | OFF, ON | Switches the vibrato and chorus effects |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Vib/Cho Type | V-1, V-2, V-3, C-1, C-2, C-3 | **Vibrato and chorus effect types** **V-1, V-2, V-3:** Adds a wavering (vibrato) that is created by changes in the pitch. The effect deepens as the value is increased **C-1, C-2, C-3:** Adds a fullness and breadth (chorus) to the sound. The effect deepens as the value is increased. |
| Vib/Cho Vintage | '50, '60, '70 | This reproduces the subtle differences in the vibrato and chorus effects in organs built in different years. |
| Vib/Cho Level | 0–127 | Vibrato/chorus effect volume |
| OD Switch | OFF, ON | Switches the overdrive effect |
| OD Drive | 0–127 | Amount of distortion |
| OD Level | 0–127 | Overdrive effect volume |
| Rotary Switch | OFF, ON | Switches the rotary effect |
| Rotary Speed | SLOW, FAST | Low– and high-frequency rotation speeds (Rate) **SLOW**: (Slow Rate) **FAST**: (Fast Rate) |
| R-Wf Slow Sp | 0.05–10.00 Hz | Rate with low-frequency rotor set to SLOW rate |
| R-Wf Fast Sp | 0.05–10.00 Hz | Rate with low-frequency rotor set to FAST rate |
| R-Wf Accel | 0–15 | Speed at which the low-frequency rotor's rotation rate changes when the rotation speed is switched |
| R-Wf Level | 0–127 | Low-frequency rotor volume |
| R-Tw Slow Sp | 0.05–10.00 Hz | High-frequency rotor setting This parameter is the same as that for the low-frequency rotor. |
| R-Tw Fast Sp | 0.05–10.00 Hz | |
| R-Tw Accel | 0–15 | |
| R-Tw Level | 0–127 | |
| Rotary Separat | 0–127 | Amount of breadth in the sound |
| Rotary Level | 0–127 | Output volume |

## 86: *STEREO EQ (STEREO EQUALIZER)

This is a four-band stereo equalizer (low, mid x 2, high).

| | Assignable Parameters |
|---|---|
| MFX Control | Level |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Low Freq | 200, 400 Hz | Select the frequency of the low range (200 Hz/400 Hz). |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Freq | 2000, 4000, 8000 Hz | Select the frequency of the high range (2000 Hz/4000 Hz/8000 Hz). |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency. Positive (+) settings will emphasize (boost) the high frequency range. |
| P1 Freq | 200–8000Hz | Adjust the frequency of Middle 1 (mid range). |
| P1 Q | 0.5, 1.0, 2.0, 4.0, 8.0 | This parameter adjusts the width of the area around the Middle 1 Frequency that will be affected by the Gain setting. Higher values of Middle 1 Q will result in a narrower area being affected. |
| P1 Gain | -15– +15 dB | Adjust the gain for the area specified by the Middle 1 Frequency and Q settings. Positive (+) settings will emphasize (boost) the Middle 1 range. |
| P2 Freq | 200–8000 Hz | Adjust the frequency of Middle 2 (mid range). |

| Parameter | Value | Description |
|---|---|---|
| P2 Q | 0.5, 1.0, 2.0, 4.0, 8.0 | This parameter adjusts the width of the area around the Middle 2 Frequency that will be affected by the Gain setting. Higher values of Middle 2 Q will result in a narrower area being affected. |
| P2 Gain | -15– +15 dB | Adjust the gain for the area specified by the Middle 2 Frequency and Q settings. Positive (+) settings will emphasize (boost) the Middle 2 range. |
| Level | 0–127 | Adjust the output level. |

## 87: *OVERDRIVE

This effect creates a soft distortion similar to that produced by vacuum tube amplifiers.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Drive, Amp Type, Pan | |

| Parameter | Value | Description |
|---|---|---|
| Drive | 0–127 | Adjust the degree of distortion. The volume will change together with the degree of distortion. |
| Pan | L64–0–63R | Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right. |
| Amp Type | SMALL, BUILT-IN, 2-STACK, 3-STACK | Select the type of guitar amp. **SMALL**: small amp **BUILT-IN**: single-unit type amp **2-STACK**: large double stack amp **3-STACK**: large triple stack amp |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Level | 0–127 | Adjust the output level. It's a good idea to use this Parameter to adjust the difference in volume between when Overdrive is applied and when it is not applied. |

## 88: *DISTORTION

This effect produces a more intense distortion than Overdrive.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Drive, Amp Type, Pan | |

| Parameter | Value | Description |
|---|---|---|
| Drive | 0–127 | Adjust the degree of distortion. The volume will change together with the degree of distortion. |
| Pan | L64–0–63R | Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right. |
| Amp Type | SMALL, BUILT-IN, 2-STACK, 3-STACK | Select the type of guitar amp. **SMALL**: small amp **BUILT-IN**: single-unit type amp **2-STACK**: large double stack amp **3-STACK**: large triple stack amp |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |

| Parameter | Value | Description |
|---|---|---|
| Level | 0–127 | Adjust the output level. It's a good idea to use this parameter to adjust the difference in volume between when Distortion is applied and when it is not applied. |

## 89: *PHASER

A phaser adds a phase-shifted sound to the direct sound, producing a twisting modulation that creates spaciousness and depth.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Depth, Manual | |

| Parameter | Value | Description |
|---|---|---|
| Manual | 100–8000 Hz | Adjust the basic frequency from which the sound will be modulated. |
| Rate | 0.05–10.00 Hz | Adjust the frequency (period) of modulation. |
| Depth | 0–127 | Adjust the depth of modulation. |
| Resonance | 0–127 | Adjust the amount of feedback for the phaser. The effect becomes more prominent as the value is increased. |
| Mix | 0–127 | Adjust the ratio with which the phase-shifted sound is combined with the direct sound. |
| Pan | L64–0–63R | Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right. |
| Level | 0–127 | Adjust the output level. |

## 90: *SPECTRUM

Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies. It is similar to an equalizer, but has 8 frequency points fixed at locations most suitable for adding character to the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Pan, Level | |

| Parameter | Value | Description |
|---|---|---|
| Band1 (250Hz) | -15– +15 dB | Adjust the 250 Hz gain. |
| Band2 (500Hz) | -15– +15 dB | Adjust the 500 Hz gain. |
| Band3 (1000Hz) | -15– +15 dB | Adjust the 1000 Hz gain. |
| Band4 (1250Hz) | -15– +15 dB | Adjust the 1250 Hz gain. |
| Band5 (2000Hz) | -15– +15 dB | Adjust the 2000 Hz gain. |
| Band6 (3150Hz) | -15– +15 dB | Adjust the 3150 Hz gain. |
| Band7 (4000Hz) | -15– +15 dB | Adjust the 4000 Hz gain. |
| Band8 (8000Hz) | -15– +15 dB | Adjust the 8000 Hz gain. |
| Q | 0.5, 1.0, 2.0, 4.0, 8.0 | Simultaneously adjust the width of the adjusted areas for all the frequency bands. |
| Pan | L64–0–63R | Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right. |
| Level | 0–127 | Adjust the output level. |

## 91: *ENHANCER

The Enhancer controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Sens, Mix | |

| Parameter | Value | Description |
|---|---|---|
| Sens | 0–127 | Adjust the sensitivity of the enhancer. |

| Parameter | Value | Description |
|---|---|---|
| Mix | 0–127 | Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Level | 0–127 | Adjust the output level. |

## 92: *AUTO WAH

The Auto Wah cyclically controls a filter to create cyclic change in timbre.

| | Assignable Parameters |
|---|---|
| MFX Control | Rate, Depth, Peak, Manual |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | LPF, BPF | Select the type of filter. **LPF**: The wah effect will be applied over a wide frequency range. **BPF**: The wah effect will be applied over a narrow frequency range. |
| Rate | 0.05–10.00 Hz | Adjust the frequency of the modulation. |
| Depth | 0–127 | Adjust the depth of the modulation. |
| Sens | 0–127 | Adjust the sensitivity with which the filter is controlled. |
| Manual | 0–127 | Adjust the frequency from which the effect is applied. |
| Peak | 0–127 | Adjust the amount of the wah effect that will occur in the area of the frequency. Lower settings will cause the effect to be applied in a broad area around the frequency. Higher settings will cause the effect to be applied in a more narrow range. |
| Level | 0–127 | Adjust the output level. |

## 93: *ROTARY

The Rotary effect simulates the sound of the rotary speakers often used with the electric organs of the past. Since the movement of the high range and low range rotors can be set independently, the unique type of modulation characteristic of these speakers can be simulated quite closely. This effect is most suitable for electric organ Patches.

| | Assignable Parameters |
|---|---|
| MFX Control | Speed, Hi Fast Rate, Lo Fast Rate, Separation |

| Parameter | Value | Description |
|---|---|---|
| Hi Slow Rate | 0.05–10.00 Hz | Adjust the slow speed (SLOW) of the high frequency rotor. |
| Lo Slow Rate | 0.05–10.00 Hz | Adjust the slow speed (SLOW) of the low frequency rotor. |
| Hi Fast Rate | 0.05–10.00 Hz | Adjust the fast speed (FAST) of the high frequency rotor. |
| Lo Fast Rate | 0.05–10.00 Hz | Adjust the fast speed (FAST) of the low frequency rotor. |

| Parameter | Value | Description |
|---|---|---|
| Speed | SLOW, FAST | Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. **SLOW**: Slow down the rotation to the specified speed (the Low Slow/Hi Slow values). **FAST**: Speed up the rotation to the specified speed (the Low Fast/Hi Fast values). |
| Hi Acceleration | 0–15 | Adjust the time it takes the high frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times. |
| Lo Acceleration | 0–15 | Adjust the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times. |
| High Level | 0–127 | Adjust the volume of the high frequency rotor. |
| Low Level | 0–127 | Adjust the volume of the low frequency rotor. |
| Separation | 0–127 | Adjust the spatial dispersion of the sound. |
| Level | 0–127 | Adjust the output level. |

## 94: *COMPRESSOR

The Compressor flattens out high levels and boosts low levels, smoothing out unevenness in volume.

| | Assignable Parameters |
|---|---|
| MFX Control | Pan, Level |

| Parameter | Value | Description |
|---|---|---|
| Sustain | 0–127 | Adjust the time over which low level sounds are boosted until they reach the specified volume. |
| Attack | 0–127 | Adjust the attack time of an input sound. |
| Pan | L64–0–63R | Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right. |
| Post Gain | 0, +6, +12, +18 dB | Adjust the output gain. |
| Low Gain | -15– +15 dB | Adjust the low frequency gain. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the high frequency gain. Positive (+) settings will emphasize (boost) the high frequency range. |
| Level | 0–127 | Adjust the output level. |

## 95: *LIMITER

The Limiter compresses signals that exceed a specified volume level, preventing distortion from occurring.

| | Assignable Parameters |
|---|---|
| MFX Control | Threshold, Release |

| Parameter | Value | Description |
|---|---|---|
| Threshold | 0–127 | Adjust the volume at which compression will begin. |
| Release | 0–127 | Adjust the time from when the volume falls below the Threshold Level until compression is no longer applied. |
| Ratio | 1.5:1, 2:1, 4:1, 100:1 | Adjust the compression ratio. |

| Parameter | Value | Description |
|---|---|---|
| Pan | L64–0–63R | Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right. |
| Post Gain | 0, +6, +12, +18 dB | Adjust the output gain. |
| Low Gain | -15– +15 dB | Adjust the low frequency gain. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the high frequency gain. Positive (+) settings will emphasize (boost) the high frequency range. |
| Level | 0–127 | Adjust the output level. |

## 96: *HEXA-CHO (HEXA-CHORUS)

Hexa-chorus uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the chorus sound is heard. |
| Rate | 0.05–10.00 Hz | Adjust the rate of modulation. |
| Depth | 0–127 | Adjust the depth of modulation. |
| Pre Delay Deviat | 0–20 | Pre Delay determines the time from when the direct sound begins until the processed sound is heard. Pre Delay Deviation adjusts the differences in Pre Delay between each chorus sound. |
| Depth Deviation | -20– +20 | Adjust the difference in modulation depth between each chorus sound. The shift between the start of each of the chorus sounds increases as the value is increased. |
| Pan Deviation | 0–20 | Adjust the difference in stereo location between each chorus sound. With a setting of 0, all chorus sounds will be in the center. With a setting of 20, each chorus sound will be spaced at 60 degree intervals relative to the center. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 97: *TREMOL CHO (TREMOLO CHORUS)

Tremolo Chorus is a chorus effect with added Tremolo (cyclic modulation of volume).

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Rate, Treml Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the chorus sound is heard. |
| Chorus Rate | 0.05–10.00 Hz | Adjust the modulation speed of the chorus effect. |
| Chorus Depth | 0–127 | Adjust the modulation depth of the chorus effect. |
| Treml Rate | 0.05–10.00 Hz | Adjust the modulation speed of the tremolo effect. |

| Parameter | Value | Description |
|---|---|---|
| Treml Separation | 0–127 | Adjust the spread of the tremolo effect. |
| Treml Phase | 0–180 degree | Adjust the spread of the tremolo effect. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the tremolo chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the tremolo chorus sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 98: *SPACE-D

Space-D is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the processed sound is heard. |
| Rate | 0.05–10.00 Hz | Adjust the rate of modulation. |
| Depth | 0–127 | Adjust the depth of modulation. |
| Phase | 0–180 degree | Adjust the spatial spread of the sound. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 99: *STEREO CHO (STEREO CHORUS)

This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Select the type of filter. **OFF**: a filter will not be used **LPF**: cut the frequency range above the cutoff frequency **HPF**: cut the frequency range below the cutoff frequency |
| Cutoff Freq | 200–8000 Hz | Adjust the basic frequency of the filter. |
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the processed sound is heard. |
| Rate | 0.05–10.00 Hz | Adjust the rate of modulation. |
| Depth | 0–127 | Adjust the depth of modulation. |
| Phase | 0–180 degree | Adjust the spatial spread of the sound. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |

| Parameter | Value | Description |
|---|---|---|
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 100: *ST.FLANGER (STEREO FLANGER)

This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Select the type of filter. **OFF**: a filter will not be used **LPF**: cut the frequency range above the cutoff frequency **HPF**: cut the frequency range below the cutoff frequency |
| Cutoff Freq | 200–8000 Hz | Adjust the basic frequency of the filter. |
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the flanger sound is heard. |
| Rate | 0.05–10.00 Hz | Adjust the rate of modulation. |
| Depth | 0–127 | Adjust the depth of modulation. |
| Phase | 0–180 degree | Adjust the spatial spread of the sound. |
| Feedback | -98– +98% | Adjust the proportion (%) of the processed sound that is returned (fed back) into the input. Positive (+) settings will return the sound in phase, and negative (-) settings will return the sound in reverse phase. The effect becomes more prominent as the value is increased. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the flanger sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the flanger sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 101: *STEP FLNGR (STEP FLANGER)

The Step Flanger effect is a flanger in which the flanger pitch changes in steps.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Step Rate, Feedback, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the flanger sound is heard. |
| Rate | 0.05–10.00 Hz | Adjust the rate of modulation. |
| Depth | 0–127 | Adjust the depth of modulation. |
| Feedback | -98– +98% | Adjust the proportion (%) of the flanger sound that is returned (fed back) into the input. Negative (-) settings will invert the phase. The effect becomes more prominent as the value is increased. |
| Step Rate | 0.10–20.00 Hz, note (*2) | Adjust the rate (period) of pitch change. Step Rate parameter can be set as a note-value of a tempo. In this case, specify the value of the desired note. |
| Phase | 0–180 degree | Adjust the spatial spread of the sound. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the flanger sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 102: *STEREO DLY (STEREO DELAY)

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance | |

| Parameter | Value | Description |
|---|---|---|
| Feedback mode | NORMAL, CROSS | Select the way in which delay sound is fed back into the effect. **NORMAL**: The left delay sound will be fed back into the left delay, and the right delay sound into the right delay. **CROSS**: The left delay sound will be fed back into the right delay, and the right delay sound into the left delay. |
| Delay Left | 0.1–500.0 ms | Adjust the time from the direct sound until when the left delay sound is heard. |
| Delay Right | 0.1–500.0 ms | Adjust the time from the direct sound until when the right delay sound is heard. |
| Phase Left | NORMAL, INVERT | Select the phase of the left delay sound. **NORMAL**: Phase is not changed. **INVERT**: Phase is inverted. |
| Phase Right | NORMAL, INVERT | Select the phase of the right delay sound. **NORMAL**: Phase is not changed. **INVERT**: Phase is inverted. |
| Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |

| Parameter | Value | Description |
|---|---|---|
| HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W– D0:100W | Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 103: *MOD DELAY (MODULATION DELAY)

This effect adds modulation to the delayed sound, producing an effect similar to a flanger.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Rate, Balance | |

| Parameter | Value | Description |
|---|---|---|
| Feedback mode | NORMAL, CROSS | Select the way in which delay sound is fed back into the effect.<br>**NORMAL**: The left delay sound will be fed back into the left delay, and the right delay sound into the right delay.<br>**CROSS**: The left delay sound will be fed back into the right delay, and the right delay sound into the left delay. |
| Delay Left | 0.1–500.0 ms | Adjust the time from the direct sound until when the left delay sound is heard. |
| Delay Right | 0.1–500.0 ms | Adjust the time from the direct sound until when the right delay sound is heard. |
| Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Rate | 0.05–10.00 Hz | Adjust the speed of the modulation. |
| Depth | 0–127 | Adjust the depth of the modulation. |
| Phase | 0–180 degree | Adjust the spatial spread of the sound. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W– D0:100W | Adjust the volume balance between the direct sound and the modulation delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the modulation delay sound will be output. |

| Parameter | Value | Description |
|---|---|---|
| Level | 0–127 | Adjust the output level. |

## 104: *TRIPLE DLY (TRIPLE TAP DELAY)

The Triple Tap Delay produces three delay sounds; center, left and right.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance | |

| Parameter | Value | Description |
|---|---|---|
| Dly Left | 200–1000 ms, note (*2) | Adjust the time delay from the direct sound until when the left delay sound is heard. |
| Dly Right | 200–1000 ms, note (*2) | Adjust the time delay from the direct sound until when the right delay sound is heard. |
| Dly Center | 200–1000 ms, note (*2) | Adjust the time delay from the direct sound until when the center delay sound is heard. |
| Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Left Level | 0–127 | Adjust the volume of the left delay sound. |
| Right Level | 0–127 | Adjust the volume of the right delay sound. |
| Center Level | 0–127 | Adjust the volume of the center delay sound. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W– D0:100W | Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output. |
| Level | 0–127 | Adjust the output level. |

Delay C, Delay L and Delay R parameters can be set as a note-value of a tempo. In this case, specify the value of the desired note.

## 105: *QUAD.DELAY (QUADRUPLE TAP DELAY)

The Quadruple Tap Delay has four delays.
The stereo location of each delay sound is as follows.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Balance | |

| Parameter | Value | Description |
|---|---|---|
| Dly1 Time | 200–1000 ms, note | Adjust the time delay from the direct sound until when delay 1 sound is heard. |
| Dly2 Time | 200–1000 ms, note | Adjust the time delay from the direct sound until when delay 2 sound is heard. |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Dly3 Time | 200–1000 ms, note | Adjust the time delay from the direct sound until when delay 3 sound is heard. |
| Dly4 Time | 200–1000 ms, note | Adjust the time delay from the direct sound until when delay 4 sound is heard. |
| Level 1 | 0–127 | Adjust the volume of delay 1 sound. |
| Level 2 | 0–127 | Adjust the volume of delay 2 sound. |
| Level 3 | 0–127 | Adjust the volume of delay 3 sound. |
| Level 4 | 0–127 | Adjust the volume of delay 4 sound. |
| Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output. |
| Level | 0–127 | Adjust the output level. |

Delay 1–4 parameters can be set as a note-value of a tempo. In this case, specify the value of the desired note.

## 106: *T-CTRL DLY (TIME CONTROL DELAY)

When the Effects MFX Control (p. 87) setting in Edit mode set to "Delay," you can use MULTI EFFECTS [CONTROL] knob to make changes in the delay time and pitch in real time.
Lengthening the delay will lower the pitch, and shortening it will raise the pitch.

| | Assignable Parameters | |
|-----------|-------|-------------|
| MFX Control | Delay, Balance | |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Delay | 200–1000 ms | Adjust the time delay from the direct sound until when each delay sound is heard. |
| Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Acceleration | 0–15 | This parameter adjusts the time over which the Delay Time will change from the current setting to a newly specified setting. The rate of change for the Delay Time directly affects the rate of pitch change. |
| HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Pan | L64–0–63R | Adjust the stereo location of the delay sound. L64 is far left, 0 is center, and 63R is far right. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |

| Parameter | Value | Description |
|-----------|-------|-------------|
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 107: *2V PCH SFT (2 VOICE PITCH SHIFTER)

A Pitch Shifter shifts the pitch of the direct sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the direct sound.

| | Assignable Parameters | |
|-----------|-------|-------------|
| MFX Control | Balance, Coarse A, Coarse B | |

| Parameter | Value | Description |
|-----------|-------|-------------|
| Mode | 1, 2, 3, 4, 5 | Higher settings of this parameter will result in slower response, but steadier pitch. |
| Coarse A | -24– +12 semitone | Adjust the pitch of Pitch Shift A in semitone steps (-2–+1 octaves). |
| Coarse B | -24– +12 semitone | Adjust the pitch of Pitch Shift B in semitone steps (-2–+1 octaves). |
| Fine A | -100– +100 cent | Make fine adjustments to the pitch of Pitch Shift A in 2-cent steps (-100–+100 cents). One cent is 1/100th of a semitone. |
| Fine B | -100– +100 cent | Make fine adjustments to the pitch of Pitch Shift B in 2-cent steps (-100–+100 cents). One cent is 1/100th of a semitone. |
| Pre Delay A | 0.0–500.0 ms | Adjust the time delay from when the direct sound begins until the Pitch Shift A sound is heard. |
| Pre Delay B | 0.0–500.0 ms | Adjust the time delay from when the direct sound begins until the Pitch Shift A sound is heard. |
| Pan A | L64–0–63R | Adjust the stereo location of the Pitch Shift A sound. L64 is far left, 0 is center, and 63R is far right. |
| Pan B | L64–0–63R | Adjust the stereo location of the Pitch Shift B sound. L64 is far left, 0 is center, and 63R is far right. |
| Level Bal | A100:0B–A0:100B | Adjust the volume balance between the Pitch Shift A and Pitch Shift B sounds. When set to A100:0B, only the sound of Pitch Shift A is output; when set to A0:100B, only the sound of Pitch Shift B is output. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the pitch shift sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the pitch shift sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 108: *FBK P.SFT (FEEDBACK PITCH SHIFTER)

This pitch shifter allows the pitch shifted sound to be fed back into the effect.

|   | Assignable Parameters |
|---|---|
| MFX Control | Balance, Coarse, Feedback |

| Parameter | Value | Description |
|---|---|---|
| Mode | 1, 2, 3, 4, 5 | Higher settings of this parameter will result in slower response, but steadier pitch. |
| Coarse | -24– +12 semitone | Adjust the pitch of the pitch shifted sound in semitone steps (-2–+1 octaves). |
| Fine | -100– +100 cent | Make fine adjustments to the pitch of the pitch shifted sound in 2-cent steps (one cent is 1/100th of a semi tone). |
| Pre Delay | 0.0–500.0 ms | Adjust the time delay from when the direct sound begins until the pitch shifted sound is heard. |
| Feedback | -98– +98% | Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Pan | L64–0–63R | Adjust the stereo location of the pitch shifted sound. L64 is far left, 0 is center, and 63R is far right. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the pitch shift sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the pitch shift sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 109: *REVERB

The Reverb effect adds reverberation to the sound, simulating an acoustic space.

|   | Assignable Parameters |
|---|---|
| MFX Control | Time, Type, Balance |

| Parameter | Value | Description |
|---|---|---|
| Type | ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2 | Select the type of Reverb effect. **ROOM1**: dense reverb with short decay **ROOM2**: sparse reverb with short decay **STAGE1**: reverb with greater late reverberation **STAGE2**: reverb with strong early reflections **HALL1**: reverb with clear reverberance **HALL2**: reverb with rich reverberance |
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the reverb sound is heard. |
| Time | 0–127 | Adjust the time length of reverberation. |

| Parameter | Value | Description |
|---|---|---|
| HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want the high frequencies to be cut, set this parameter to BYPASS. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the reverb sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the reverb sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 110: *GATE REV (GATED REVERB)

Gate Reverb is a special type of reverb in which the reverberant sound is cut off before its natural length.

|   | Assignable Parameters |
|---|---|
| MFX Control | Balance |

| Parameter | Value | Description |
|---|---|---|
| Type | NORMAL, REVERSE, SWEEP1, SWEEP2 | Select the type of reverb. **NORMAL**: conventional gate reverb **REVERSE**: backwards reverb **SWEEP1**: the reverberant sound moves from right to left **SWEEP2**: the reverberant sound moves from left to right |
| Pre Delay | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the reverb sound is heard. |
| Time | 5–500 ms | Adjust the time from when the reverb is heard until when it disappears. |
| Low Gain | -15– +15 dB | Adjust the gain of the low frequency range. Positive (+) settings will emphasize (boost) the low frequency range. |
| High Gain | -15– +15 dB | Adjust the gain of the high frequency range. Positive (+) settings will emphasize (boost) the high frequency range. |
| Balance | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the reverb sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the reverb sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 111: *OVDRV→CHO (OVERDRIVE→CHORUS)

This effect connects an overdrive and a chorus in series.

|  | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Bal, Chorus Rate, OD Drive | |

| Parameter | Value | Description |
|---|---|---|
| OD Drive | 0–127 | Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion. |
| OD Pan | L64–0–63R | Adjust the stereo location of the overdrive sound. L64 is far left, 0 is center, and 63R is far right. |
| Chorus PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the chorus sound is heard. |
| Chorus Rate | 0.05–10.00 Hz | Adjust the modulation speed of the chorus effect. |
| Chorus Depth | 0–127 | Adjust the modulation depth of the chorus effect. |
| Chorus Bal | D100:0W–D0:100W | Adjust the volume balance between the overdrive that is sent through the chorus and the overdrive sound that is not sent through the chorus. With a setting of "D100:0W," only the overdrive sound will be output. With a setting of "D0:100W," only the overdrive sound that is sent through the chorus will be output. |
| Level | 0–127 | Adjust the output level. |

## 112: *OVDRV→FLN (OVERDRIVE→FLANGER)

This effect connects an overdrive and a flanger in series.

|  | Assignable Parameters | |
|---|---|---|
| MFX Control | Flngr Bal, Flngr Rate, OD Drive | |

| Parameter | Value | Description |
|---|---|---|
| OD Drive | 0–127 | Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion. |
| OD Pan | L64–0–63R | Adjust the stereo location of the overdrive sound. L64 is far left, 0 is center, and 63R is far right. |
| Flngr PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the flanger sound is heard. |
| Flngr Rate | 0.05–10.00 Hz | Adjust the modulation speed of the flanger effect. |
| Flngr Depth | 0–127 | Adjust the modulation depth of the flanger effect. |
| Flngr Fbk | -98– +98% | Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Adjust the volume balance between the overdrive that is sent through the flanger and the overdrive sound that is not sent through the flanger. With a setting of "D100:0W," only the overdrive sound will be output. With a setting of "D0:100W," only the overdrive sound that is sent through the flanger will be output. |
| Level | 0–127 | Adjust the output level. |

## 113: *OVDRV→DLY (OVERDRIVE→DELAY)

This effect connects an overdrive and a delay in series.

|  | Assignable Parameters | |
|---|---|---|
| MFX Control | Delay Bal, OD Drive | |

| Parameter | Value | Description |
|---|---|---|
| OD Drive | 0–127 | Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion. |
| OD Pan | L64–0–63R | Adjust the stereo location of the overdrive sound. L64 is far left, 0 is center, and 63R is far right. |
| Delay Time | 0.1–500.0 ms | Adjust the time delay from when the direct sound begins until the delay sound is heard. |
| Delay Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which delayed sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Delay Bal | D100:0W–D0:100W | Adjust the volume balance between the overdrive sound that is sent through the delay and the overdrive sound that is not sent through the delay. With a setting of "D100:0W," only the overdrive sound will be output. With a setting of "D0:100W," only the overdrive sound that is sent through the delay will be output. |
| Level | 0–127 | Adjust the output level. |

## 114: *DIST→CHO (DISTORTION→CHORUS)

This effect connects distortion and chorus in series. The parameters are essentially the same as "111: OD→CHORUS," with the exception of the following two.

OD Drive → Dst Drive (Specify the amount of distortion.)
OD Pan → Dist Pan (Specify the stereo location of the distortion sound.)

## 115: *DIST→FLNGR (DISTORTION→FLANGER)

This effect connects distortion and flanger in series. The parameters are essentially the same as in "112: OD→FLANGER," with the exception of the following two.

OD Drive → Dst Drive (Specify the amount of distortion.)
OD Pan → Dist Pan (Specify the stereo location of the distortion sound.)

## 116: *DIST→DELAY (DISTORTION→DELAY)

This effect connects distortion and delay in series. The parameters are essentially the same as in "113: OD→DELAY," with the exception of the following two.

OD Drive        →Dst Drive (Specify the amount of distortion.)
OD Pan          →Dist Pan (Specify the stereo location of the distortion sound.)

## 117: *ENH→CHORUS (ENHANCER→ CHORUS)

This effect connects an enhancer and a chorus in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Bal, Chorus Rate, Enhancer Sens | |

| Parameter | Value | Description |
|---|---|---|
| Enhancer Sens | 0–127 | Adjust the sensitivity of the enhancer. |
| Enhancer Mix | 0–127 | Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound. |
| Chorus PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the chorus sound is heard. |
| Chorus Rate | 0.05–10.00 Hz | Adjust the modulation speed of the chorus effect. |
| Chorus Depth | 0–127 | Adjust the modulation depth of the chorus effect. |
| Chorus Bal | D100:0W– D0:100W | Adjust the volume balance between the enhancer sound that is sent through the chorus and the enhancer sound that is not sent through the chorus. With a setting of "D100:0W," only the enhancer sound will be output. With a setting of "D0:100W," only the enhancer sound that is sent through the chorus will be output. |
| Level | 0–127 | Adjust the output level. |

## 118: *ENH→FLANGR (ENHANCER→ CHORUS)

This effect connects an enhancer and a flanger in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Flngr Bal, Flngr Rate, Enhancer Sens | |

| Parameter | Value | Description |
|---|---|---|
| Enhancer Sens | 0–127 | Adjust the sensitivity of the enhancer. |
| Enhancer Mix | 0–127 | Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound. |
| Flngr PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the flanger sound is heard. |
| Flngr Rate | 0.05–10.00 Hz | Adjust the modulation speed of the flanger effect. |
| Flngr Depth | 0–127 | Adjust the modulation depth of the flanger effect. |
| Flngr Fbk | -98– +98% | Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W– D0:100W | Adjust the volume balance between the enhancer sound that is sent through the flanger and the enhancer sound that is not sent through the flanger. With a setting of "D100:0W," only the enhancer sound will be output. With a setting of "D0:100W," only the enhancer sound that is sent through the flanger will be output. |
| Level | 0–127 | Adjust the output level. |

## 119: *ENH→DELAY (ENHANCER→ DELAY)

This effect connects an enhancer and a delay in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Delay Bal, Enhancer Sens | |

| Parameter | Value | Description |
|---|---|---|
| Enhancer Sens | 0–127 | Adjust the sensitivity of the enhancer. |
| Enhancer Mix | 0–127 | Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound. |
| Delay Time | 0.1–500.0 ms | Adjust the time delay from when the direct sound begins until the delay sound is heard. |
| Delay Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the delay feedback, set this parameter to BYPASS. |
| Delay Bal | D100:0W– D0:100W | Adjust the volume balance between the enhancer sound that is sent through the delay and the enhancer sound that is not sent through the delay. With a setting of "D100:0W," only the enhancer sound will be output. With a setting of "D0:100W," only the enhancer sound that is sent through the delay will be output. |
| Level | 0–127 | Adjust the output level. |

## 120: *CHO→DELAY (CHORUS→DELAY)

This effect connects a chorus and a delay unit in series.

| | Assignable Parameters | |
|---|---|---|
| MFX Control | Chorus Bal, Delay Bal | |

| Parameter | Value | Description |
|---|---|---|
| Chorus PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the chorus sound is heard. |
| Chorus Rate | 0.05–10.00 Hz | Adjust the modulation speed of the chorus effect. |
| Chorus Depth | 0–127 | Adjust the modulation depth of the chorus effect. |
| Chorus Bal | D100:0W– D0:100W | Adjust the volume balance between the direct sound and the chorus sound. With a setting of "D100:0W," only the direct sound will be output. With a setting of "D0:100W," only the chorus sound will be output. |
| Delay Time | 0.1–500.0 ms | Adjust the time delay from when the direct sound begins until the delay sound is heard. |
| Delay Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS. |
| Delay Bal | D100:0W– D0:100W | Adjust the volume balance between the chorus sound that is sent through the delay and the chorus sound that is not sent through the delay. With a setting of "D100:0W," only the chorus sound will be output. With a setting of "D0:100W," only the chorus that is sent through the delay sound will be output. |
| Level | 0–127 | Adjust the output level. |

## 121: *FLANGR→DLY (FLANGER→DELAY)

This effect connects a flanger and a delay in series.

|  | Assignable Parameters | |
| --- | --- | --- |
| MFX Control | Flngr Bal, Delay Bal | |

| Parameter | Value | Description |
| --- | --- | --- |
| Flngr PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the flanger sound is heard. |
| Flngr Rate | 0.05–10.00 Hz | Adjust the modulation speed of the flanger effect. |
| Flngr Depth | 0–127 | Adjust the modulation depth of the flanger effect. |
| Flngr Fbk | -98– +98% | Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the flanger sound. With a setting of "D100:0W," only the direct sound will be output. With a setting of "D0:100W," only the flanger sound will be output. |
| Delay Time | 0.1–500.0 ms | Adjust the time delay from when the direct sound begins until the delay sound is heard. |
| Delay Feedback | -98– +98% | Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase. |
| Delay HF Damp | 200–8000 Hz, BYPASS | Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the delay feedback, set this parameter to BYPASS. |
| Delay Bal | D100:0W–D0:100W | Adjust the volume balance between the flanger sound that is sent through the delay and the flanger sound that is not sent through the delay. With a setting of "D100:0W," only the flanger sound will be output. With a setting of "D0:100W," only the flanger sound that is sent through the delay will be output. |
| Level | 0–127 | Adjust the output level. |

## 122: *CHO→FLANGR (CHORUS→ FLANGER)

This effect connects a chorus and a flanger in series.

|  | Assignable Parameters | |
| --- | --- | --- |
| MFX Control | Chorus Bal, Flngr Bal, Chorus Rate, Flngr Rate | |

| Parameter | Value | Description |
| --- | --- | --- |
| Chorus PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the chorus sound is heard. |
| Chorus Rate | 0.05–10.00 Hz | Adjust the modulation speed of the chorus effect. |
| Chorus Depth | 0–127 | Adjust the modulation depth of the chorus effect. |
| Chorus Bal | D100:0W–D0:100W | Adjust the volume balance between the direct sound and the chorus sound. With a setting of "D100:0W," only the direct sound will be output. With a setting of "D0:100W," only the chorus sound will be output. |
| Flngr PreDly | 0.0–100.0 ms | Adjust the time delay from when the direct sound begins until the flanger sound is heard. |

| Parameter | Value | Description |
| --- | --- | --- |
| Flngr Rate | 0.05–10.00 Hz | Adjust the modulation speed of the flanger effect. |
| Flngr Depth | 0–127 | Adjust the modulation depth of the flanger effect. |
| Flngr Fbk | -98– +98% | Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| Flngr Bal | D100:0W–D0:100W | Adjust the volume balance between the chorus sound and the chorus sound that is passed through the flanger. With a setting of "D100:0W," only the chorus sound will be output. With a setting of "D0:100W," only the chorus sound that passes through the flanger will be output. |
| Level | 0–127 | Adjust the output level. |

## 123: *CHORUS/DLY (CHORUS/DELAY)

This effect connects a chorus and a delay in parallel.

|  | Assignable Parameters | |
| --- | --- | --- |
| MFX Control | Chorus Bal, Delay Bal, Chorus Rate | |

The parameters are the same as for "120: CHORUS→DELAY." However, the parameter adjusts the volume balance between the direct sound and the delay sound.

## 124: *FLANGR/DLY (FLANGER/DELAY)

This effect connects a flanger and a delay in parallel.

|  | Assignable Parameters | |
| --- | --- | --- |
| MFX Control | Flngr Bal, Delay Bal, Flngr Rate | |

The parameters are the same as for "121: FLANGER→DELAY." However, the Delay Bal parameter adjusts the volume balance between the direct sound and the delay sound.

## 125: *CHO/FLNGR (CHORUS/FLANGER)

This effect connects a chorus and a flanger in parallel. The parameters are the same as for "122: CHORUS→FLANGER." However, the Flg Bal parameter adjusts the volume balance between the direct sound and the flanger sound.

### note (1):

♪₃ (Sixty-fourth-note triplet), ♪ (Sixty-fourth note), ♪₃ (Thirty-second-note triplet),

♪ (Thirty-second note), ♪₃ (Sixteenth-note triplet), ♪ (Dotted thirty-second note),

♪ (Sixteenth note), ♪₃ (Eighth-note triplet), ♪ (Dotted sixteenth note),

♪ (Eighth note), ♩₃ (Quarter-note triplet), ♪ (Dotted eighth note),

♩ (Quarter note), ♩₃ (Half-note triplet), ♩ (Dotted quarter note), ♩ (Half note),

○₃ (Whole-note triplet), ♩ (Dotted half note), ○ (Whole note),

⊪⊪₃ (Double-note triplet), ○ (Dotted whole note), ⊪⊪ (Double note)

### note (2):

♪ (Sixteenth note), ♪₃ (Eighth-note triplet), ♪ (Dotted sixteenth note), ♪ (Eighth note),

♩₃ (Half-note triplet), ♪ (Dotted eighth note), ♩ (Quarter note), ♩₃ (Half-note triplet),

♩ (Dotted quarter note), ♩ (Half note),

# Chorus Parameter

The RD-700SX's Chorus effect unit can also be used as a stereo delay unit.

## 0: OFF

Neither Chorus or Delay is used.

## 1: CHORUS

| Parameter | Value | Description |
|---|---|---|
| Filter Type | OFF, LPF, HPF | Type of filter<br>**OFF**: no filter is used<br>**LPF**: cuts the frequency range above the Cutoff Freq<br>**HPF**: cuts the frequency range below the Cutoff Freq |
| Cutoff Freq | 200–8000 Hz | Basic frequency of the filter |
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate Mode | Hz, note | When this is set to "note," the effect is synchronized with the tempo. |
| Rate (Hz) | 0.05–10.00 Hz | Frequency of modulation (Hz) |
| Rate ( ♪ ) | note (*) | Frequency of modulation (note) |
| Depth | 0–127 | Depth of modulation |
| Phase | 0–180 deg | Spatial spread of the sound |
| Feedback | 0–127 | Adjusts the amount of the chorus sound that is fed back into the effect. |

## 2: DELAY

| Parameter | Value | Description |
|---|---|---|
| Delay L Mode | ms, note | When this is set to "note," the effect is synchronized with the tempo. |
| Delay L (ms) | 0–1000 ms | Adjusts the time until the delay sound is heard. (Hz) |
| Delay L ( ♪ ) | note (*) | Adjusts the time until the delay sound is heard. (note) |
| Delay R Mode | ms, note | Settings of the Delay R |
| Delay R (ms) | 0–1000 ms | The parameters are the same as for the |
| Delay R ( ♪ ) | note (*) | Delay L. |
| Delay C Mode | ms, note | Settings of the Delay C |
| Delay C (ms) | 0–1000 ms | The parameters are the same as for the |
| Delay C ( ♪ ) | note (*) | Delay L. |
| Center Feedbak | -98–+98 % | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Left Level | 0–127 | Volume of each delay sound |
| Right Level | 0–127 | Volume of each delay sound |
| Center Level | 0–127 | Volume of each delay sound |

## 3: GM2 CHORUS

| Parameter | Value | Description |
|---|---|---|
| Pre-LPF | 0–7 | Cuts the high frequency range of the sound coming into the chorus.<br>Higher values will cut more of the high frequencies. |
| Level | 0–127 | Volume of the chorus sound |
| Feedback | 0–127 | Adjusts the amount of the chorus sound that is fed back into the effect. |
| Delay | 0–127 | Adjusts the delay time from the direct sound until the chorus sound is heard. |
| Rate | 0–127 | Frequency of modulation |
| Depth | 0–127 | Depth of modulation |
| Send To Reverb | 0–127 | Adjusts the amount of chorus sound that will be sent to the reverb. |

### note (*):

♬₃ (Sixty-fourth-note triplet), ♪ (Sixty-fourth note), ♪₃ (Thirty-second-note triplet),

♪ (Thirty-second note), ♪₃ (Sixteenth-note triplet), ♪. (Dotted thirty-second note),

♪ (Sixteenth note), ♪₃ (Eighth-note triplet), ♪. (Dotted sixteenth note),

♪ (Eighth note), ♩₃ (Quarter-note triplet), ♪. (Dotted eighth note),

♩ (Quarter note), ♩₃ (Half-note triplet), ♩. (Dotted quarter note), ♩ (Half note),

○₃ (Whole-note triplet), ♩. (Dotted half note), ○ (Whole note),

𝄺₃ (Double-note triplet), ○. (Dotted whole note), 𝄺 (Double note)

# Reverb Parameter

These settings allow you to select the desired type of reverb, and its characteristics.

## 0: OFF

Reverb is not used.

## 1: REVERB

Normal reverb

| Parameter | Value | Description |
|---|---|---|
| Type | ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY | Type of reverb/delay<br>**ROOM1**: short reverb with high density<br>**ROOM2**: short reverb with low density<br>**STAGE1**: reverb with greater late reverberation<br>**STAGE2**: reverb with strong early reflections<br>**HALL1**: very clear-sounding reverb<br>**HALL2**: rich reverb<br>**DELAY**: conventional delay effect<br>**PAN-DELAY**: delay effect with echoes that pan left and right |
| Time | 0–127 | Time length of reverberation (Type: ROOM1-HALL2)<br>Delay time (Type: DELAY, PAN-DELAY) |
| HF Damp | 200–8000 Hz, BYPASS | Adjusts the frequency above which the high-frequency content of the reverb sound will be cut, or "damped." If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| Delay Feedback | 0–127 | Adjusts the amount of delay feedback when the Type setting is DELAY or PAN-DELAY. |

## 2: SRV ROOM

This simulates typical room acoustic reflections.

| Parameter | Value | Description |
|---|---|---|
| Pre Delay | 0.0–100.0 ms | Adjusts the delay time from the direct sound until the reverb sound is heard. |
| Time | 0–127 | Time length of reverberation |
| Size | 1–8 | Size of the simulated room or hall |
| High Cut | 160 Hz–12.5 kHz, BYPASS | Adjusts the frequency above which the high-frequency content of the reverb will be reduced. If you do not want to reduce the high frequencies, set this parameter to BYPASS. |
| Density | 0–127 | Density of reverb |
| Diffusion | 0–127 | Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. (The effect of this setting is most pronounced with long reverb times.) |
| LF Damp Freq | 50–4000 Hz | Adjusts the frequency below which the low-frequency content of the reverb sound will be reduced, or "damped." |
| LF Damp Gain | -36–0 dB | Adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of "0," there will be no reduction of the reverb's low-frequency content. |
| HF DampFreq | 4000 Hz–12.5 kHz | Adjusts the frequency above which the high-frequency content of the reverb sound will be reduced, or "damped." |

| Parameter | Value | Description |
|---|---|---|
| HF Damp Gain | -36–0 dB | Adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of "0," there will be no reduction of the reverb's high-frequency content. |

## 3: SRV HALL

This simulates typical concert hall acoustic reflections.
The parameters are the same as for "2: SRV_ROOM."

## 4: SRV PLATE

This simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate.
The parameters are the same as for "2: SRV_ROOM."

## 5: GM2 REVERB

GM2 Reverb

| Parameter | Value | Description |
|---|---|---|
| Character | 0–7 | Type of reverb<br>**0–5**: reverb<br>**6, 7**: delay |
| Pre-LPF | 0–7 | Cuts the high frequency range of the sound coming into the reverb. Higher values will cut more of the high frequencies. |
| Level | 0–127 | Output level of reverberation |
| Time | 0–127 | Time length of reverberation |
| Delay Feedback | 0–127 | Adjusts the amount of the delay sound that is fed back into the effect when the Reverb Character setting is 6 or 7. |

## 6: CATHEDRAL

Simulates the type of reverberation in churches and other such spaces bounded by hard walls

| Parameter | Value | Description |
|---|---|---|
| Pre-LPF | 0–7 | Cuts the high frequency range of the sound coming into the reverb. Higher values will cut more of the high frequencies. |
| Level | 0–127 | Output level of reverberation |
| Time | 0–127 | Time length of reverberation |

# Tone List

MSB: Bank Select MSB (Control Number: 0)

LSB: Bank Select LSB (Control Number: 32)

PC: Program Change

## [PIANO]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 1 | Superior Grd | 87 | 64 | 1 |
| 2 | X-Ultimate | 87 | 64 | 2 |
| 3 | Grand RD | 87 | 64 | 3 |
| 4 | Dark Ballad | 87 | 64 | 4 |
| 5 | X-Pure Grand | 87 | 64 | 5 |
| 6 | Mellow Piano | 87 | 64 | 6 |
| 7 | Bright Grand | 87 | 64 | 7 |
| 8 | X-PureMellow | 87 | 64 | 8 |
| 9 | Superior Str | 87 | 64 | 9 |
| 10 | Superior Pd1 | 87 | 64 | 10 |
| 11 | Superior Pd2 | 87 | 64 | 11 |
| 12 | Hybrid Grd 1 | 87 | 64 | 12 |
| 13 | Hybrid Grd 2 | 87 | 64 | 13 |
| 14 | 600 Grand | 87 | 64 | 14 |
| 15 | Dynamic Grd | 87 | 64 | 15 |
| 16 | Rock Piano 1 | 87 | 64 | 16 |
| 17 | Rock Piano 2 | 87 | 64 | 17 |
| 18 | Honky-tonk | 87 | 64 | 18 |
| 19 | SuperiorMono | 87 | 64 | 19 |
| 20 | GrandRD Mono | 87 | 64 | 20 |

## [E.PIANO]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 21 | SX E.Piano 1 | 87 | 65 | 1 |
| 22 | Stage Phazer | 87 | 65 | 2 |
| 23 | Hit EP | 87 | 65 | 3 |
| 24 | 60'sE.Piano1 | 87 | 65 | 4 |
| 25 | 60'sE.Piano2 | 87 | 65 | 5 |
| 26 | Phaser EP | 87 | 65 | 6 |
| 27 | StageCabinet | 87 | 65 | 7 |
| 28 | NY E.Piano | 87 | 65 | 8 |
| 29 | SX E.Piano 2 | 87 | 65 | 9 |
| 30 | FM E.Piano | 87 | 65 | 10 |
| 31 | 60'sE.Piano3 | 87 | 65 | 11 |
| 32 | 70's E.Piano | 87 | 65 | 12 |
| 33 | Psycho EP | 87 | 65 | 13 |
| 34 | EP Belle | 87 | 65 | 14 |
| 35 | D-50 E.Piano | 87 | 65 | 15 |
| 36 | Pro Stage | 87 | 65 | 16 |
| 37 | Vintage EP 1 | 87 | 65 | 17 |
| 38 | Vintage EP 2 | 87 | 65 | 18 |
| 39 | S.A.E.P. | 87 | 65 | 19 |
| 40 | Hard 60's EP | 87 | 65 | 20 |
| 41 | E.Grand | 87 | 65 | 21 |

## [CLAV/MALLET]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 42 | Funky D | 87 | 66 | 1 |
| 43 | SX Clavi | 87 | 66 | 2 |
| 44 | Clav 1 | 87 | 66 | 3 |
| 45 | Clav 2 | 87 | 66 | 4 |
| 46 | Phase Clav | 87 | 66 | 5 |
| 47 | WahWah Clav | 87 | 66 | 6 |
| 48 | Cutter Clavi | 87 | 66 | 7 |
| 49 | D6 Clavi | 87 | 66 | 8 |
| 50 | Natural Hps. | 87 | 66 | 9 |
| 51 | Harpsi+Str | 87 | 66 | 10 |
| 52 | NaturalC.Hps | 87 | 66 | 11 |
| 53 | St.Harpsichd | 87 | 66 | 12 |
| 54 | Celesta | 87 | 66 | 13 |
| 55 | Vibrations | 87 | 66 | 14 |
| 56 | Vibraphone | 87 | 66 | 15 |
| 57 | Marimba | 87 | 66 | 16 |
| 58 | Morning Lite | 87 | 66 | 17 |
| 59 | Ballad Bells | 87 | 66 | 18 |
| 60 | Chime Bells | 87 | 66 | 19 |
| 61 | MusicBox Pad | 87 | 66 | 20 |
| 62 | Islands Mlt | 87 | 66 | 21 |

## [ORGAN]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 63 | TW-Organ 1 | 112 | 0 | 1 |
| 64 | TW-Organ 2 | 112 | 0 | 2 |
| 65 | TW-Organ 3 | 112 | 0 | 3 |
| 66 | TW-Organ 4 | 112 | 0 | 4 |
| 67 | TW-Organ 5 | 112 | 0 | 5 |
| 68 | TW-Organ 6 | 112 | 0 | 6 |
| 69 | TW-Organ 7 | 112 | 0 | 7 |
| 70 | TW-Organ 8 | 112 | 0 | 8 |
| 71 | TW-Organ 9 | 112 | 0 | 9 |
| 72 | TW-Organ 10 | 112 | 0 | 10 |
| 73 | X Perc Organ | 87 | 67 | 1 |
| 74 | Rock Organ | 87 | 67 | 2 |
| 75 | Zepix Organ | 87 | 67 | 3 |
| 76 | Gospel Spin | 87 | 67 | 4 |
| 77 | Mellow Bars | 87 | 67 | 5 |
| 78 | Perc.Organ 1 | 87 | 67 | 6 |
| 79 | FullDraw Org | 87 | 67 | 7 |
| 80 | Full Stops | 87 | 67 | 8 |
| 81 | British B | 87 | 67 | 9 |
| 82 | Perc.Organ 2 | 87 | 67 | 10 |
| 83 | Perc. B | 87 | 67 | 11 |
| 84 | 60's Organ | 87 | 67 | 12 |
| 85 | Surf's Up! | 87 | 67 | 13 |
| 86 | R&B Organ | 87 | 67 | 14 |
| 87 | Rocker Spin | 87 | 67 | 15 |
| 88 | Purple Spin | 87 | 67 | 16 |
| 89 | Massive Pipe | 87 | 67 | 17 |
| 90 | Mid Pipe Org | 87 | 67 | 18 |
| 91 | Theater Org | 87 | 67 | 19 |
| 92 | ParisRomance | 87 | 67 | 20 |

## [STRINGS]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 93 | SX Strings 1 | 87 | 68 | 1 |
| 94 | Studio Sect. | 87 | 68 | 2 |
| 95 | Staccato VS | 87 | 68 | 3 |
| 96 | Full Strings | 87 | 68 | 4 |
| 97 | SX Strings 2 | 87 | 68 | 5 |
| 98 | Warm Strings | 87 | 68 | 6 |
| 99 | X StrSection | 87 | 68 | 7 |
| 100 | 2-way Sect. | 87 | 68 | 8 |
| 101 | Stringz 101 | 87 | 68 | 9 |
| 102 | Biggie Bows | 87 | 68 | 10 |
| 103 | OrchestraPad | 87 | 68 | 11 |
| 104 | Orch & Horns | 87 | 68 | 12 |
| 105 | Soft Orch | 87 | 68 | 13 |
| 106 | ChmbrStrings | 87 | 68 | 14 |
| 107 | Ending Scene | 87 | 68 | 15 |
| 108 | Str Quartet | 87 | 68 | 16 |
| 109 | Pizzicato | 87 | 68 | 17 |
| 110 | Machine Str | 87 | 68 | 18 |
| 111 | JP Strings 1 | 87 | 68 | 19 |
| 112 | JP Strings 2 | 87 | 68 | 20 |
| 113 | SynthStrings | 87 | 68 | 21 |
| 114 | OB Slow Str | 87 | 68 | 22 |

## [PAD]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 115 | Soft Pad | 87 | 69 | 1 |
| 116 | Silky Way | 87 | 69 | 2 |
| 117 | Lunar Strngs | 87 | 69 | 3 |
| 118 | Nu Epic Pad | 87 | 69 | 4 |
| 119 | Strings Pad | 87 | 69 | 5 |
| 120 | Mashy Scene | 87 | 69 | 6 |
| 121 | Side Band X | 87 | 69 | 7 |
| 122 | R&B SoftPad | 87 | 69 | 8 |
| 123 | Glass Organ | 87 | 69 | 9 |
| 124 | Evolution X | 87 | 69 | 10 |
| 125 | Whisper Pad | 87 | 69 | 11 |
| 126 | Combination | 87 | 69 | 12 |
| 127 | HumanKindnes | 87 | 69 | 13 |
| 128 | StellarTreck | 87 | 69 | 14 |
| 129 | Jupiter-X | 87 | 69 | 15 |
| 130 | Mash Pad | 87 | 69 | 16 |
| 131 | InfinitePhsr | 87 | 69 | 17 |
| 132 | Flange Dream | 87 | 69 | 18 |
| 133 | Morph Filter | 87 | 69 | 19 |
| 134 | Jupiter 2005 | 87 | 69 | 20 |

## [GTR/BASS]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 135 | NaturalNylon | 87 | 70 | 1 |
| 136 | Dyna Nylon | 87 | 70 | 2 |
| 137 | Nylon Guitar | 87 | 70 | 3 |
| 138 | Steel Gtr | 87 | 70 | 4 |
| 139 | Steel Away | 87 | 70 | 5 |
| 140 | 12str Gtr | 87 | 70 | 6 |
| 141 | Jz Gtr Hall | 87 | 70 | 7 |
| 142 | Clear Guitar | 87 | 70 | 8 |
| 143 | JC Strat | 87 | 70 | 9 |
| 144 | DistGt Mt | 87 | 70 | 10 |
| 145 | Blusey OD | 87 | 70 | 11 |
| 146 | Touch Drive | 87 | 70 | 12 |
| 147 | Punker | 87 | 70 | 13 |
| 148 | SX Ac.Bass | 87 | 70 | 14 |
| 149 | SX Upright | 87 | 70 | 15 |
| 150 | FingerMaster | 87 | 70 | 16 |
| 151 | Chorus Bass | 87 | 70 | 17 |
| 152 | Pick Bass | 87 | 70 | 18 |
| 153 | Slap Bass | 87 | 70 | 19 |
| 154 | SX Fretnot | 87 | 70 | 20 |
| 155 | RichFretless | 87 | 70 | 21 |
| 156 | All Round Bs | 87 | 70 | 22 |
| 157 | Return2Base! | 87 | 70 | 23 |
| 158 | Rubber Bass | 87 | 70 | 24 |
| 159 | Virtual RnBs | 87 | 70 | 25 |
| 160 | Punch MG | 87 | 70 | 26 |
| 161 | Garage Bass | 87 | 70 | 27 |
| 162 | Smooth Bass | 87 | 70 | 28 |
| 163 | MG Bass | 87 | 70 | 29 |
| 164 | 101 Bass | 87 | 70 | 30 |
| 165 | Poly Bass | 87 | 70 | 31 |
| 166 | Synth Bass | 87 | 70 | 32 |
| 167 | Gashed Bass | 87 | 70 | 33 |
| 168 | Vox Bass | 87 | 70 | 34 |
| 169 | Bass+RideCym | 87 | 70 | 35 |
| 170 | Pearly Harp | 87 | 70 | 36 |
| 171 | Sitar 1 | 87 | 70 | 37 |
| 172 | Sitar 2 | 87 | 70 | 38 |

## [BRASS/WINDS]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 173 | R&R Brass | 87 | 71 | 1 |
| 174 | VoyagerBrass | 87 | 71 | 2 |
| 175 | StackTp Sect | 87 | 71 | 3 |
| 176 | Oct Brass | 87 | 71 | 4 |
| 177 | FullSt Brass | 87 | 71 | 5 |
| 178 | Wood Symphny | 87 | 71 | 6 |
| 179 | Bigband Sax | 87 | 71 | 7 |
| 180 | Biggie Brass | 87 | 71 | 8 |
| 181 | ChamberWinds | 87 | 71 | 9 |
| 182 | Soprano Sax | 87 | 71 | 10 |
| 183 | Alto Sax | 87 | 71 | 11 |
| 184 | Tenor Sax | 87 | 71 | 12 |
| 185 | Honker Bari | 87 | 71 | 13 |
| 186 | Flute | 87 | 71 | 14 |
| 187 | Oboe | 87 | 71 | 15 |
| 188 | Pan Pipes | 87 | 71 | 16 |
| 189 | Bend SynBrs | 87 | 71 | 17 |
| 190 | Saw Brass | 87 | 71 | 18 |

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 191 | Jump For KY | 87 | 71 | 19 |
| 192 | X-Saw Brass | 87 | 71 | 20 |
| 193 | JP8000 Brass | 87 | 71 | 21 |
| 194 | Silky JP | 87 | 71 | 22 |
| 195 | Afro Horns | 87 | 71 | 23 |
| 196 | Triumph Brs | 87 | 71 | 24 |

## [VOICE/SYNTH]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 197 | Jazz Scat | 87 | 72 | 1 |
| 198 | Morning Star | 87 | 72 | 2 |
| 199 | Aerial Choir | 87 | 72 | 3 |
| 200 | Angelique | 87 | 72 | 4 |
| 201 | Aah Vox | 87 | 72 | 5 |
| 202 | Beauty Vox | 87 | 72 | 6 |
| 203 | Choir Aahs | 87 | 72 | 7 |
| 204 | Jazz Doos | 87 | 72 | 8 |
| 205 | Female Aahs | 87 | 72 | 9 |
| 206 | Gospel Oohs | 87 | 72 | 10 |
| 207 | Galactic SX | 87 | 72 | 11 |
| 208 | Synth Stack | 87 | 72 | 12 |
| 209 | Power Stack | 87 | 72 | 13 |
| 210 | Oct Unison | 87 | 72 | 14 |
| 211 | Trancy Synth | 87 | 72 | 15 |
| 212 | SideBandBell | 87 | 72 | 16 |
| 213 | Saw Lead 1 | 87 | 72 | 17 |
| 214 | Saw Lead 2 | 87 | 72 | 18 |
| 215 | Square Lead | 87 | 72 | 19 |
| 216 | Sweep Lead | 87 | 72 | 20 |
| 217 | SuperSawSlow | 87 | 72 | 21 |
| 218 | Jupiter Lead | 87 | 72 | 22 |

## [RHY/GM2]

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 219 | SX Pop Kit | 86 | 64 | 1 |
| 220 | SX Rock Kit | 86 | 64 | 2 |
| 221 | SX Jazz Kit | 86 | 64 | 3 |
| 222 | SX R&B Kit | 86 | 64 | 4 |
| 223 | SX House Kit | 86 | 64 | 5 |
| 224 | GM2 STANDARD | 120 | 0 | 1 |
| 225 | GM2 ROOM | 120 | 0 | 9 |
| 226 | GM2 POWER | 120 | 0 | 17 |
| 227 | GM2 ELECTRIC | 120 | 0 | 25 |
| 228 | GM2 ANALOG | 120 | 0 | 26 |
| 229 | GM2 JAZZ | 120 | 0 | 33 |
| 230 | GM2 BRUSH | 120 | 0 | 41 |
| 231 | GM2 ORCHSTRA | 120 | 0 | 49 |
| 232 | GM2 SFX | 120 | 0 | 57 |
| 233 | Piano 1 | 121 | 0 | 1 |
| 234 | Piano 1w | 121 | 1 | 1 |
| 235 | European Pf | 121 | 2 | 1 |
| 236 | Piano 2 | 121 | 0 | 2 |
| 237 | Piano 2w | 121 | 1 | 2 |
| 238 | Piano 3 | 121 | 0 | 3 |
| 239 | Piano 3w | 121 | 1 | 3 |
| 240 | Honky-tonk | 121 | 0 | 4 |
| 241 | Honky-tonk 2 | 121 | 1 | 4 |
| 242 | E.Piano 1 | 121 | 0 | 5 |
| 243 | St.Soft EP | 121 | 1 | 5 |

| No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|
| 244 | FM+SA EP | 121 | 2 | 5 |
| 245 | 60's E.Piano | 121 | 3 | 5 |
| 246 | E.Piano 2 | 121 | 0 | 6 |
| 247 | Detuned EP 2 | 121 | 1 | 6 |
| 248 | St.FM EP | 121 | 2 | 6 |
| 249 | EP Legend | 121 | 3 | 6 |
| 250 | EP Phase | 121 | 4 | 6 |
| 251 | Harpsichord | 121 | 0 | 7 |
| 252 | Coupled Hps. | 121 | 1 | 7 |
| 253 | Harpsi.w | 121 | 2 | 7 |
| 254 | Harpsi.o | 121 | 3 | 7 |
| 255 | Clav. | 121 | 0 | 8 |
| 256 | Pulse Clav | 121 | 1 | 8 |
| 257 | Celesta | 121 | 0 | 9 |
| 258 | Glockenspiel | 121 | 0 | 10 |
| 259 | Music Box | 121 | 0 | 11 |
| 260 | Vibraphone | 121 | 0 | 12 |
| 261 | Vibraphone w | 121 | 1 | 12 |
| 262 | Marimba | 121 | 0 | 13 |
| 263 | Marimba w | 121 | 1 | 13 |
| 264 | Xylophone | 121 | 0 | 14 |
| 265 | Tubular-bell | 121 | 0 | 15 |
| 266 | Church Bell | 121 | 1 | 15 |
| 267 | Carillon | 121 | 2 | 15 |
| 268 | Santur | 121 | 0 | 16 |
| 269 | Organ 1 | 121 | 0 | 17 |
| 270 | Trem. Organ | 121 | 1 | 17 |
| 271 | 60's Organ 1 | 121 | 2 | 17 |
| 272 | 70's E.Organ | 121 | 3 | 17 |
| 273 | Organ 2 | 121 | 0 | 18 |
| 274 | Chorus Or.2 | 121 | 1 | 18 |
| 275 | Perc. Organ | 121 | 2 | 18 |
| 276 | Organ 3 | 121 | 0 | 19 |
| 277 | Church Org.1 | 121 | 0 | 20 |
| 278 | Church Org.2 | 121 | 1 | 20 |
| 279 | Church Org.3 | 121 | 2 | 20 |
| 280 | Reed Organ | 121 | 0 | 21 |
| 281 | Puff Organ | 121 | 1 | 21 |
| 282 | Accordion Fr | 121 | 0 | 22 |
| 283 | Accordion It | 121 | 1 | 22 |
| 284 | Harmonica | 121 | 0 | 23 |
| 285 | Bandoneon | 121 | 0 | 24 |
| 286 | Nylon-str.Gt | 121 | 0 | 25 |
| 287 | Ukulele | 121 | 1 | 25 |
| 288 | Nylon Gt.o | 121 | 2 | 25 |
| 289 | Nylon Gt.2 | 121 | 3 | 25 |
| 290 | Steel-str.Gt | 121 | 0 | 26 |
| 291 | 12-str.Gt | 121 | 1 | 26 |
| 292 | Mandolin | 121 | 2 | 26 |
| 293 | Steel + Body | 121 | 3 | 26 |
| 294 | Jazz Gt. | 121 | 0 | 27 |
| 295 | Pedal Steel | 121 | 1 | 27 |
| 296 | Clean Gt. | 121 | 0 | 28 |
| 297 | Chorus Gt. | 121 | 1 | 28 |
| 298 | Mid Tone GTR | 121 | 2 | 28 |
| 299 | Muted Gt. | 121 | 0 | 29 |
| 300 | Funk Pop | 121 | 1 | 29 |
| 301 | Funk Gt.2 | 121 | 2 | 29 |
| 302 | Jazz Man | 121 | 3 | 29 |
| 303 | Overdrive Gt | 121 | 0 | 30 |
| 304 | Guitar Pinch | 121 | 1 | 30 |
| 305 | DistortionGt | 121 | 0 | 31 |

## Tone List

| No. | Tone Name | MSB | LSB | PC | No. | Tone Name | MSB | LSB | PC | No. | Tone Name | MSB | LSB | PC |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|
| 306 | Feedback Gt. | 121 | 1 | 31 | 368 | Jump Brass | 121 | 3 | 63 | 430 | Taisho Koto | 121 | 1 | 108 |
| 307 | Dist Rtm GTR | 121 | 2 | 31 | 369 | Synth Brass2 | 121 | 0 | 64 | 431 | Kalimba | 121 | 0 | 109 |
| 308 | Gt.Harmonics | 121 | 0 | 32 | 370 | SynBrass sfz | 121 | 1 | 64 | 432 | Bagpipe | 121 | 0 | 110 |
| 309 | Gt. Feedback | 121 | 1 | 32 | 371 | Velo Brass 1 | 121 | 2 | 64 | 433 | Fiddle | 121 | 0 | 111 |
| 310 | Acoustic Bs. | 121 | 0 | 33 | 372 | Soprano Sax | 121 | 0 | 65 | 434 | Shanai | 121 | 0 | 112 |
| 311 | Fingered Bs. | 121 | 0 | 34 | 373 | Alto Sax | 121 | 0 | 66 | 435 | Tinkle Bell | 121 | 0 | 113 |
| 312 | Finger Slap | 121 | 1 | 34 | 374 | Tenor Sax | 121 | 0 | 67 | 436 | Agogo | 121 | 0 | 114 |
| 313 | Picked Bass | 121 | 0 | 35 | 375 | Baritone Sax | 121 | 0 | 68 | 437 | Steel Drums | 121 | 0 | 115 |
| 314 | Fretless Bs. | 121 | 0 | 36 | 376 | Oboe | 121 | 0 | 69 | 438 | Woodblock | 121 | 0 | 116 |
| 315 | Slap Bass 1 | 121 | 0 | 37 | 377 | English Horn | 121 | 0 | 70 | 439 | Castanets | 121 | 1 | 116 |
| 316 | Slap Bass 2 | 121 | 0 | 38 | 378 | Bassoon | 121 | 0 | 71 | 440 | Taiko | 121 | 0 | 117 |
| 317 | Synth Bass 1 | 121 | 0 | 39 | 379 | Clarinet | 121 | 0 | 72 | 441 | Concert BD | 121 | 1 | 117 |
| 318 | SynthBass101 | 121 | 1 | 39 | 380 | Piccolo | 121 | 0 | 73 | 442 | Melo. Tom 1 | 121 | 0 | 118 |
| 319 | Acid Bass | 121 | 2 | 39 | 381 | Flute | 121 | 0 | 74 | 443 | Melo. Tom 2 | 121 | 1 | 118 |
| 320 | Clavi Bass | 121 | 3 | 39 | 382 | Recorder | 121 | 0 | 75 | 444 | Synth Drum | 121 | 0 | 119 |
| 321 | Hammer | 121 | 4 | 39 | 383 | Pan Flute | 121 | 0 | 76 | 445 | 808 Tom | 121 | 1 | 119 |
| 322 | Synth Bass 2 | 121 | 0 | 40 | 384 | Bottle Blow | 121 | 0 | 77 | 446 | Elec Perc | 121 | 2 | 119 |
| 323 | Beef FM Bass | 121 | 1 | 40 | 385 | Shakuhachi | 121 | 0 | 78 | 447 | Reverse Cym. | 121 | 0 | 120 |
| 324 | RubberBass 2 | 121 | 2 | 40 | 386 | Whistle | 121 | 0 | 79 | 448 | Gt.FretNoise | 121 | 0 | 121 |
| 325 | Attack Pulse | 121 | 3 | 40 | 387 | Ocarina | 121 | 0 | 80 | 449 | Gt.Cut Noise | 121 | 1 | 121 |
| 326 | Violin | 121 | 0 | 41 | 388 | Square Wave | 121 | 0 | 81 | 450 | String Slap | 121 | 2 | 121 |
| 327 | Slow Violin | 121 | 1 | 41 | 389 | MG Square | 121 | 1 | 81 | 451 | Breath Noise | 121 | 0 | 122 |
| 328 | Viola | 121 | 0 | 42 | 390 | 2600 Sine | 121 | 2 | 81 | 452 | Fl.Key Click | 121 | 1 | 122 |
| 329 | Cello | 121 | 0 | 43 | 391 | Saw Wave | 121 | 0 | 82 | 453 | Seashore | 121 | 0 | 123 |
| 330 | Contrabass | 121 | 0 | 44 | 392 | OB2 Saw | 121 | 1 | 82 | 454 | Rain | 121 | 1 | 123 |
| 331 | Tremolo Str | 121 | 0 | 45 | 393 | Doctor Solo | 121 | 2 | 82 | 455 | Thunder | 121 | 2 | 123 |
| 332 | PizzicatoStr | 121 | 0 | 46 | 394 | Natural Lead | 121 | 3 | 82 | 456 | Wind | 121 | 3 | 123 |
| 333 | Harp | 121 | 0 | 47 | 395 | SequencedSaw | 121 | 4 | 82 | 457 | Stream | 121 | 4 | 123 |
| 334 | Yang Qin | 121 | 1 | 47 | 396 | Syn.Calliope | 121 | 0 | 83 | 458 | Bubble | 121 | 5 | 123 |
| 335 | Timpani | 121 | 0 | 48 | 397 | Chiffer Lead | 121 | 0 | 84 | 459 | Bird | 121 | 0 | 124 |
| 336 | Orche str | 121 | 0 | 49 | 398 | Charang | 121 | 0 | 85 | 460 | Dog | 121 | 1 | 124 |
| 337 | Orchestra | 121 | 1 | 49 | 399 | Wire Lead | 121 | 1 | 85 | 461 | Horse-Gallop | 121 | 2 | 124 |
| 338 | 60s Strings | 121 | 2 | 49 | 400 | Solo Vox | 121 | 0 | 86 | 462 | Bird 2 | 121 | 3 | 124 |
| 339 | Slow Strings | 121 | 0 | 50 | 401 | 5th Saw Wave | 121 | 0 | 87 | 463 | Telephone 1 | 121 | 0 | 125 |
| 340 | Syn.Strings1 | 121 | 0 | 51 | 402 | Bass & Lead | 121 | 0 | 88 | 464 | Telephone 2 | 121 | 1 | 125 |
| 341 | Syn.Strings3 | 121 | 1 | 51 | 403 | Delayed Lead | 121 | 1 | 88 | 465 | DoorCreaking | 121 | 2 | 125 |
| 342 | Syn.Strings2 | 121 | 0 | 52 | 404 | Fantasia | 121 | 0 | 89 | 466 | Door | 121 | 3 | 125 |
| 343 | Choir Aahs | 121 | 0 | 53 | 405 | Warm Pad | 121 | 0 | 90 | 467 | Scratch | 121 | 4 | 125 |
| 344 | Chorus Aahs | 121 | 1 | 53 | 406 | Sine Pad | 121 | 1 | 90 | 468 | Wind Chimes | 121 | 5 | 125 |
| 345 | Voice Oohs | 121 | 0 | 54 | 407 | Polysynth | 121 | 0 | 91 | 469 | Helicopter | 121 | 0 | 126 |
| 346 | Humming | 121 | 1 | 54 | 408 | Space Voice | 121 | 0 | 92 | 470 | Car-Engine | 121 | 1 | 126 |
| 347 | SynVox | 121 | 0 | 55 | 409 | Itopia | 121 | 1 | 92 | 471 | Car-Stop | 121 | 2 | 126 |
| 348 | Analog Voice | 121 | 1 | 55 | 410 | Bowed Glass | 121 | 0 | 93 | 472 | Car-Pass | 121 | 3 | 126 |
| 349 | OrchestraHit | 121 | 0 | 56 | 411 | Metal Pad | 121 | 0 | 94 | 473 | Car-Crash | 121 | 4 | 126 |
| 350 | Bass Hit | 121 | 1 | 56 | 412 | Halo Pad | 121 | 0 | 95 | 474 | Siren | 121 | 5 | 126 |
| 351 | 6th Hit | 121 | 2 | 56 | 413 | Sweep Pad | 121 | 0 | 96 | 475 | Train | 121 | 6 | 126 |
| 352 | Euro Hit | 121 | 3 | 56 | 414 | Ice Rain | 121 | 0 | 97 | 476 | Jetplane | 121 | 7 | 126 |
| 353 | Trumpet | 121 | 0 | 57 | 415 | Soundtrack | 121 | 0 | 98 | 477 | Starship | 121 | 8 | 126 |
| 354 | Dark Trumpet | 121 | 1 | 57 | 416 | Crystal | 121 | 0 | 99 | 478 | Burst Noise | 121 | 9 | 126 |
| 355 | Trombone | 121 | 0 | 58 | 417 | Syn Mallet | 121 | 1 | 99 | 479 | Applause | 121 | 0 | 127 |
| 356 | Trombone 2 | 121 | 1 | 58 | 418 | Atmosphere | 121 | 0 | 100 | 480 | Laughing | 121 | 1 | 127 |
| 357 | Bright Tb | 121 | 2 | 58 | 419 | Brightness | 121 | 0 | 101 | 481 | Screaming | 121 | 2 | 127 |
| 358 | Tuba | 121 | 0 | 59 | 420 | Goblin | 121 | 0 | 102 | 482 | Punch | 121 | 3 | 127 |
| 359 | MutedTrumpet | 121 | 0 | 60 | 421 | Echo Drops | 121 | 0 | 103 | 483 | Heart Beat | 121 | 4 | 127 |
| 360 | MuteTrumpet2 | 121 | 1 | 60 | 422 | Echo Bell | 121 | 1 | 103 | 484 | Footsteps | 121 | 5 | 127 |
| 361 | French Horns | 121 | 0 | 61 | 423 | Echo Pan | 121 | 2 | 103 | 485 | Gun Shot | 121 | 0 | 128 |
| 362 | Fr.Horn 2 | 121 | 1 | 61 | 424 | Star Theme | 121 | 0 | 104 | 486 | Machine Gun | 121 | 1 | 128 |
| 363 | Brass 1 | 121 | 0 | 62 | 425 | Sitar | 121 | 0 | 105 | 487 | Lasergun | 121 | 2 | 128 |
| 364 | Brass 2 | 121 | 1 | 62 | 426 | Sitar 2 | 121 | 1 | 105 | 488 | Explosion | 121 | 3 | 128 |
| 365 | Synth Brass1 | 121 | 0 | 63 | 427 | Banjo | 121 | 0 | 106 | | | | | |
| 366 | Pro Brass | 121 | 1 | 63 | 428 | Shamisen | 121 | 0 | 107 | | | | | |
| 367 | Oct SynBrass | 121 | 2 | 63 | 429 | Koto | 121 | 0 | 108 | | | | | |

# Rhythm Set List

* [EXC]: will not sound simultaneously with other percussion instruments of the same number.

| Note | SX Pop Kit | SX Rock Kit | SX Jazz Kit | SX R&B Kit | SX House Kit |
|---|---|---|---|---|---|
| 21 | Rock Kick | Old Kick | Old Kick | Analog Kick 2 | Dance Kick |
| 22 | Pop Kick | Pop Kick | Jazz Kick 1 | TR909 Kick 1 | Lo-Bit CHH [EXC1] |
| 23 | Analog Kick 1 | Analog Kick 1 | Analog Kick 1 | TR909 Kick 2 | Techno Kick 2 |
| 24 | Hush Kick | Rock Kick | Jazz Swish | R&B CHH 2 [EXC1] | Concert Snare |
| 25 | Pop CHH 1 [EXC1] | Rock CHH1 [EXC1] | Jazz Tap 1 | R&B CHH 3 [EXC1] | Snare Roll |
| 26 | Reg. Snare 1 | Rock Snare 1 | Jazz Tap 2 | R&B CHH 4 [EXC1] | Finger Snap |
| 27 | Finger Snap | Finger Snap | Finger Snap | Finger Snap | High-Q |
| 28 | 707 Claps | 707 Claps | 707 Claps | 707 Claps | Slap |
| 29 | Hand Clap 1 | Hand Clap 1 | Hand Clap 1 | Hand Clap 1 | Scratch Push |
| 30 | Hand Clap 2 | Hand Clap 2 | Hand Clap 2 | Gospel Hand Clap 2 | Scratch Pull |
| 31 | Hand Clap 3 | Hand Clap 3 | Hand Clap 3 | Hand Clap 2 | Sticks |
| 32 | Pop PHH [EXC1] | Pop PHH [EXC1] | Pop PHH [EXC1] | R&B CHH 5 [EXC1] | Square Click |
| 33 | Hand Clap 4 | Hand Clap 4 | Gospel Hand Clap | Gospel Hand Clap | Metro Click |
| 34 | Snare Roll | Snare Roll | Snare Roll | Lo-Bit CHH [EXC1] | Metro Bell |
| 35 | Old Kick | Old Kick | Pop Kick | Analog Kick 1 | House Kick 1 |
| C2 36 | Hush Kick | Rock Kick | Jazz Kick 2 | R&B Kick | House Kick 2 |
| 37 | Reg.Stick | Rock Side Stick | Jazz Snare Swing | R&B Side Stick 1 | R&B Side Stick 1 |
| 38 | Reg. Snare | Rock Snare 1 | Jazz Snare 1 | R&B Snare 1 | House Snare 1 |
| 39 | Reg. Snare Ghost | Snare Ghost | Pop Snare Swing | R&B Snare 2 | House Snare 2 |
| 40 | Titan Snare | Rock Snare 2 | Jazz Snare 2 | R&B Snare 3 | House Snare 3 |
| 41 | Reg. Low Tom Flm | Rock Low Tom Flm | Jazz Low Tom Flm | Sharp Low Tom 6 | House Low Tom 1 |
| 42 | Pop CHH 1 [EXC1] | Rock CHH 1 [EXC1] | Pop CHH 1 [EXC1] | R&B CHH 1 [EXC1] | House CHH [EXC1] |
| 43 | Reg. Low Tom | Rock Low Tom | Jazz Low Tom | Sharp Low Tom 5 | House Low Tom 2 |
| 44 | Pop CHH 2 [EXC1] | Rock CHH 2 [EXC1] | Pop CHH 2 [EXC1] | R&B CHH 1 [EXC1] | House PHH [EXC1] |
| 45 | Reg.Mid Tom Flm | Rock Mid Tom Flm | Jazz Mid Tom Flm | Sharp Low Tom 4 | House Mid Tom 1 |
| 46 | Pop OHH [EXC1] | Rock OHH [EXC1] | Pop OHH [EXC1] | R&B OHH [EXC1] | House OHH [EXC1] |
| 47 | Reg. Mid Tom | Rock Mid Tom | Jazz Mid Tom | Sharp High Tom 3 | House Mid Tom 2 |
| C3 48 | Reg. High Tom Flm | Rock High Tom Flm | Jazz High Tom Flm | Sharp High Tom 2 | House High Tom 1 |
| 49 | Pop Crash Cymbal 1 | Rock Crash Cymbal | Jazz Crash Cymbal | R&B Crash Cymbal | House Crash Cymbal |
| 50 | Reg. High Tom | Rock HighTom | Jazz HighTom | Sharp High Tom 1 | House High Tom 2 |
| 51 | Pop RideCymbal 1 | Pop Ride Cymbal 2 | Jazz Ride Cymbal 1 | Pop Ride Cymbal 1 | House Ride Cymbal |
| 52 | Pop Chinese Cymbal | Rock Chinese Cymbal | Jazz Chinese Cymbal | R&B Chinese Cym | Reverse Cymbal |
| 53 | Pop Ride Bell | Rock Ride Bell | Jazz Ride Cymbal 2 | R&B Ride Bell | House Ride Bell |
| 54 | Tambourine | Tambourine | Tambourine | Tambourine | ShakeTambourine |
| 55 | Pop Splash Cymbal | Rock Splsh Cymbal | Pop Splsh Cymbal | TR909 Ride | House Splash Cymbal |
| 56 | Cha Cha Cowbell | Cha Cha Cowbell | Cha Cha Cowbell | Cha Cha Cowbell | House Cowbell |
| 57 | Pop Crash Cymbal 2 | Rock Chinese Cymbal 2 | Jazz Crash Cymbal 2 | House Crash Cymbal | HouseCrash Cymbal |
| 58 | Vibraslap | Vibraslap | Vibraslap | Vibraslap | Vibraslap |
| 59 | Pop RideCymbal 2 | Pop Ride Cymbal 1 | Pop Ride Cymbal 1 | Pop Ride Cymbal 2 | Pop Ride Cymbal 2 |
| C4 60 | Bongo Hi | Bongo Hi | Bongo Hi | House Bongo Hi | House Bongo Hi |
| 61 | Bongo Lo | Bongo Lo | Bongo Lo | House Bongo Lo | House Bongo Lo |
| 62 | Conga Mute | Conga Mute | Conga Mute | House Conga Hi | House Conga Hi |
| 63 | Conga Hi | Conga Hi | Conga Hi | House Conga Mt | House Conga Mt |
| 64 | Conga Lo | Conga Lo | Conga Lo | House Conga Lo | House Conga Lo |
| 65 | Timbale Hi | Timbale Hi | Timbale Hi | Timbale Hi | Timbale Hi |
| 66 | Timbale Lo | Timbale Lo | Timbale Lo | Timbale Lo | Timbale Lo |
| 67 | Agogo Bell Hi | Agogo Bell Hi | Agogo Bell Hi | Agogo Bell Hi | Agogo Bell Hi |
| 68 | Agogo Bell Lo | Agogo Bell Lo | Agogo Bell Lo | Agogo Bell Lo | Agogo Bell Lo |
| 69 | Shaker 2 | Shaker 2 | Shaker 2 | Cabasa | Cabasa |
| 70 | Shaker 3 | Shaker 3 | Shaker 3 | House Maracas | House Maracas |
| 71 | Whistle Short [EXC2] | Whistle Short [EXC2] | Whistle Short [EXC2] | Whistle Short [EXC2] | Whistle Short [EXC2] |
| C5 72 | Whistle Long [EXC2] | Whistle Long [EXC2] | Whistle Long [EXC2] | Whistle Long [EXC2] | Whistle Long [EXC2] |
| 73 | Guiro Short [EXC3] | Guiro Short [EXC3] | Guiro Short [EXC3] | Guiro Short [EXC3] | Guiro Short [EXC3] |
| 74 | Guiro Long [EXC3] | Guiro Long [EXC3] | Guiro Long [EXC3] | Guiro Long [EXC3] | Guiro Long [EXC3] |
| 75 | Claves | Claves | Claves | House Claves | House Claves |
| 76 | Wood Block Hi | Wood Block Hi | Wood Block Hi | Wood Block Hi | Wood Block Hi |
| 77 | Wood Block Lo | Wood Block Lo | Wood Block Lo | Wood Block Lo | Wood Block Lo |
| 78 | Cuica Mute [EXC4] | Cuica Mute [EXC4] | Cuica Mute [EXC4] | Hoo Hi [EXC4] | Hoo Hi [EXC4] |
| 79 | Cuica Open [EXC4] | Cuica Open [EXC4] | Cuica Open [EXC4] | Hoo Lo [EXC4] | Hoo Lo [EXC4] |
| 80 | Triangle Mt [EXC5] | Triangle Mt [EXC5] | Triangle Mt [EXC5] | Triangle Mt [EXC5] | Electric Triangle Mt [EXC5] |
| 81 | Triangle Op [EXC5] | Triangle Op [EXC5] | Triangle Op [EXC5] | Triangle Op [EXC5] | Electric Triangle Op [EXC5] |
| 82 | Cabasa | Cabasa | Cabasa | Shaker | Shaker |
| 83 | Jingle Bell | Jingle Bell | Jingle Bell | Jingle Bell | Jingle Bell |
| C6 84 | Wind Chime | Wind Chime | Wind Chime | Wind Chime | Wind Chime |
| 85 | Castanets | Castanets | Castanets | Castanets | Castanets |
| 86 | Surdo Mute [EXC6] | Surdo Mute [EXC6] | Surdo Mute [EXC6] | Surdo Mute [EXC6] | Surdo Mute [EXC6] |
| 87 | Surdo Open [EXC6] | Surdo Open [EXC6] | Surdo Open [EXC6] | Surdo Open [EXC6] | Surdo Open [EXC6] |
| 88 | Cana | Cana | Cana | Tambourine | Cana |
| 89 | Flamenco Timbale Hi | Flamenco Timbale Hi | Flamenco Timbale Hi | Tambourine | Flamenco Timbale Hi |
| 90 | Flamenco Timbale Lo | Flamenco Timbale Lo | Flamenco Timbale Lo | Cabasa Up | Flamenco Timbale Lo |
| 91 | Flamenco Timbale Flam | Flamenco Timbale Flam | Flamenco Timbale Flam | Cabasa Down | Flamenco Timbale Flam |
| 92 | Shaker 1 | Shaker 1 | Shaker 1 | Shaker 1 | Shaker 1 |
| 93 | Shaker 2 | Shaker 2 | Shaker 2 | Shaker 2 | Shaker 2 |
| 94 | Bongo Lo Mt | Bongo Lo Mt | Bongo Lo Mt | Bongo Lo Mt | Bongo Lo Mt |
| 95 | Grit Snare | LoFi Snare | Jazz Snare | Grit Snare | LoFi Snare |
| C7 96 | Jungle Snare 1 | Jungle Snare 1 | Jazz Snare 2 | Jungle Snare 1 | Jungle Snare 1 |
| 97 | Reg.Stick | Rock Side Stick | Jazz Snare Swing | R&B Side Stick 2 | R&B Side Stick 2 |
| 98 | Titan Snare | Rock Snare 2 | Jazz Swish | Analog Snare | Analog Snare |
| 99 | Old Kick | Old Kick | Old Kick | HipHop Kick | TR808 Kick 1 |
| 100 | Pop Kick | Pop Kick | Jazz Kick 1 | TR808 Kick 1 | TR808 Kick 2 |
| 101 | Rock Kick | Rock Kick | Jazz Kick 2 | TR808 Kick 2 | Jungle Kick |
| 102 | Analog Kick 1 | Analog Kick 1 | Analog Kick 1 | Techno Kick | Techno Kick |
| 103 | Rock Snare Dry | Rock Snare Dry | Jazz Tap 1 | Rock Snare Dry | Rock Snare Dry |
| 104 | Electric Snare | Electric Snare | Jazz Tap 2 | Electric Snare | Electric Snare |
| 105 | Reg. Snare Ghost | Rock Snare Ghost | Pop Snare Swing | Jungle Snare 2 | Jungle Snare 2 |
| 106 | Slappy | Slappy | Slappy | Vinyl Noise | Slappy |
| 107 | Wah Gtr Noise 1 | Wah Gtr Noise 1 | Wah Gtr Noise 1 | Wah Gtr Noise 1 | Wah Gtr Noise 1 |
| C8 108 | Wah Gtr Noise 2 | Wah Gtr Noise 2 | Wah Gtr Noise 2 | Wah Gtr Noise 2 | Wah Gtr Noise 2 |

# Rhythm Set List

* -----: No sound.

* [EXC]: will not sound simultaneously with other percussion instruments of the same number.

| | | GM2 STANDARD | | GM2 ROOM | | GM2 POWER | | GM2 ELECTRIC | |
|---|---|---|---|---|---|---|---|---|---|
| 21 | | ----- | | ----- | | ----- | | ----- | |
| | 22 | ----- | | ----- | | ----- | | ----- | |
| 23 | | ----- | | ----- | | ----- | | ----- | |
| 24 | | ----- | | ----- | | ----- | | ----- | |
| | 25 | ----- | | ----- | | ----- | | ----- | |
| 26 | | ----- | | ----- | | ----- | | ----- | |
| | 27 | High-Q | | High-Q | | High-Q | | High-Q | |
| 28 | | Slap | | Slap | | Slap | | Slap | |
| | 29 | ScratchPush | [EXC7] | ScratchPush | [EXC7] | ScratchPush | [EXC7] | ScratchPush | [EXC7] |
| | 30 | ScratchPull | [EXC7] | ScratchPull | [EXC7] | ScratchPull | [EXC7] | ScratchPull | [EXC7] |
| 31 | | Sticks | | Sticks | | Sticks | | Sticks | |
| | 32 | SquareClick | | SquareClick | | SquareClick | | SquareClick | |
| 33 | | Mtrnm.Click | | Mtrnm.Click | | Mtrnm.Click | | Mtrnm.Click | |
| | 34 | Mtrnm. Bell | | Mtrnm. Bell | | Mtrnm. Bell | | Mtrnm. Bell | |
| 35 | | Jazz Kick 1 | | Mix Kick | | Standard KK1 | | Power Kick1 | |
| C2 36 | | Mix Kick | | Standard KK1 | | Power Kick1 | | Elec Kick 1 | |
| | 37 | Side Stick | | Side Stick | | Side Stick | | Side Stick | |
| 38 | | Standard SN1 | | Standard SN2 | | Dance Snare1 | | Elec. Snare | |
| | 39 | 909 HandClap | | 909 HandClap | | 909 HandClap | | 909 HandClap | |
| 40 | | Elec Snare 3 | | Elec Snare 7 | | Elec Snare 4 | | Elec Snare 2 | |
| 41 | | Real Tom 6 | | Room Tom 5 | | Room Tom 5 | | Synth Drum 2 | |
| | 42 | Close HiHat2 | [EXC1] | Close HiHat2 | [EXC1] | Close HiHat2 | [EXC1] | Close HiHat2 | [EXC1] |
| 43 | | Real Tom 6 | | Room Tom 6 | | Room Tom 6 | | Synth Drum 2 | |
| | 44 | Pedal HiHat2 | [EXC1] | Pedal HiHat2 | [EXC1] | Pedal HiHat2 | [EXC1] | Pedal HiHat2 | [EXC1] |
| 45 | | Real Tom 4 | | Room Tom 2 | | Room Tom 2 | | Synth Drum 2 | |
| | 46 | Open HiHat2 | [EXC1] | Open HiHat2 | [EXC1] | Open HiHat2 | [EXC1] | Open HiHat2 | [EXC1] |
| 47 | | Real Tom 4 | | Room Tom 2 | | Room Tom 2 | | Synth Drum 2 | |
| C3 48 | | Real Tom 1 | | Rock Tom 1 | | Rock Tom 1 | | Synth Drum 2 | |
| | 49 | Crash Cym.1 | | Crash Cym.1 | | Crash Cym.1 | | Crash Cym.1 | |
| 50 | | Real Tom 1 | | Rock Tom 1 | | Rock Tom 1 | | Synth Drum 2 | |
| | 51 | Ride Cymbal | | Ride Cymbal | | Ride Cymbal | | Ride Cymbal | |
| 52 | | ChinaCymbal | | ChinaCymbal | | ChinaCymbal | | ReverseCymbl | |
| 53 | | Ride Bell | | Ride Bell | | Ride Bell | | Ride Bell | |
| | 54 | Tambourine | | Tambourine | | Tambourine | | Tambourine | |
| 55 | | Splash Cym. | | Splash Cym. | | Splash Cym. | | Splash Cym. | |
| | 56 | Cowbell | | Cowbell | | Cowbell | | Cowbell | |
| 57 | | Crash Cym.2 | | Crash Cym.2 | | Crash Cym.2 | | Crash Cym.2 | |
| | 58 | Vibraslap | | Vibraslap | | Vibraslap | | Vibraslap | |
| 59 | | Ride Cymbal4 | | Ride Cymbal4 | | Ride Cymbal4 | | Ride Cymbal4 | |
| C4 60 | | Bongo High | | Bongo High | | Bongo High | | Bongo High | |
| | 61 | Bongo Lo | | Bongo Lo | | Bongo Lo | | Bongo Lo | |
| 62 | | Mute H.Conga | | Mute H.Conga | | Mute H.Conga | | Mute H.Conga | |
| | 63 | Conga Hi Opn | | Conga Hi Opn | | Conga Hi Opn | | Conga Hi Opn | |
| 64 | | Conga Lo Opn | | Conga Lo Opn | | Conga Lo Opn | | Conga Lo Opn | |
| 65 | | High Timbale | | High Timbale | | High Timbale | | High Timbale | |
| | 66 | Low Timbale | | Low Timbale | | Low Timbale | | Low Timbale | |
| 67 | | Agogo | | Agogo | | Agogo | | Agogo | |
| | 68 | Agogo | | Agogo | | Agogo | | Agogo | |
| 69 | | Cabasa | | Cabasa | | Cabasa | | Cabasa | |
| | 70 | Maracas | | Maracas | | Maracas | | Maracas | |
| 71 | | ShrtWhistle | [EXC2] | ShrtWhistle | [EXC2] | ShrtWhistle | [EXC2] | ShrtWhistle | [EXC2] |
| C5 72 | | LongWhistle | [EXC2] | LongWhistle | [EXC2] | LongWhistle | [EXC2] | LongWhistle | [EXC2] |
| | 73 | Short Guiro | [EXC3] | Short Guiro | [EXC3] | Short Guiro | [EXC3] | Short Guiro | [EXC3] |
| 74 | | Long Guiro | [EXC3] | Long Guiro | [EXC3] | Long Guiro | [EXC3] | Long Guiro | [EXC3] |
| | 75 | Claves | | Claves | | Claves | | Claves | |
| 76 | | Woodblock | | Woodblock | | Woodblock | | Woodblock | |
| 77 | | Woodblock | | Woodblock | | Woodblock | | Woodblock | |
| | 78 | Mute Cuica | [EXC4] | Mute Cuica | [EXC4] | Mute Cuica | [EXC4] | Mute Cuica | [EXC4] |
| 79 | | Open Cuica | [EXC4] | Open Cuica | [EXC4] | Open Cuica | [EXC4] | Open Cuica | [EXC4] |
| | 80 | MuteTriangl | [EXC5] | MuteTriangl | [EXC5] | MuteTriangl | [EXC5] | MuteTriangl | [EXC5] |
| 81 | | OpenTriangl | [EXC5] | OpenTriangl | [EXC5] | OpenTriangl | [EXC5] | OpenTriangl | [EXC5] |
| | 82 | Shaker | | Shaker | | Shaker | | Shaker | |
| 83 | | Jingle Bell | | Jingle Bell | | Jingle Bell | | Jingle Bell | |
| C6 84 | | Bell Tree | | Bell Tree | | Bell Tree | | Bell Tree | |
| | 85 | Castanets | | Castanets | | Castanets | | Castanets | |
| 86 | | Mute Surdo | [EXC6] | Mute Surdo | [EXC6] | Mute Surdo | [EXC6] | Mute Surdo | [EXC6] |
| | 87 | Open Surdo | [EXC6] | Open Surdo | [EXC6] | Open Surdo | [EXC6] | Open Surdo | [EXC6] |
| 88 | | ----- | | ----- | | ----- | | ----- | |

* -----: No sound.

* [EXC]: will not sound simultaneously with other percussion instruments of the same number.

| Note | GM2 ANALOG | GM2 JAZZ | GM2 BRUSH | GM2 ORCHSTRA | GM2 SFX |
|---|---|---|---|---|---|
| 21 | ----- | ----- | ----- | ----- | ----- |
| 22 | ----- | ----- | ----- | ----- | ----- |
| 23 | ----- | ----- | ----- | ----- | ----- |
| 24 | ----- | ----- | ----- | ----- | ----- |
| 25 | ----- | ----- | ----- | ----- | ----- |
| 26 | ----- | ----- | ----- | ----- | ----- |
| 27 | High-Q | High-Q | High-Q | Close HiHat2 [EXC1] | ----- |
| 28 | Slap | Slap | Slap | Pedal HiHat2 [EXC1] | ----- |
| 29 | ScratchPush [EXC7] | ScratchPush [EXC7] | ScratchPush [EXC7] | Open HiHat2 [EXC1] | ----- |
| 30 | ScratchPull [EXC7] | ScratchPull [EXC7] | ScratchPull [EXC7] | Ride Cymbal3 | ----- |
| 31 | Sticks | Sticks | Sticks | Sticks | ----- |
| 32 | SquareClick | SquareClick | SquareClick | SquareClick | ----- |
| 33 | Mtrnm.Click | Mtrnm.Click | Mtrnm.Click | Mtrnm.Click | ----- |
| 34 | Mtrnm. Bell | Mtrnm. Bell | Mtrnm. Bell | Mtrnm. Bell | ----- |
| 35 | TR-808 Kick2 | Jazz Kick 2 | Jazz Kick 2 | Concert BD | ----- |
| C2 36 | TR-808 Kick | Jazz Kick 1 | Jazz Kick 1 | Mix Kick | ----- |
| 37 | 808 Rimshot | Side Stick | Side Stick | Side Stick | ----- |
| 38 | 808 Snare 1 | Standard SN3 | Brush Swirl | Concert Snr | ----- |
| 39 | 909 HandClap | 909 HandClap | Brush Slap1 | Castanets | High-Q |
| 40 | Elec Snare 6 | Elec Snare 5 | Brush Swirl | Concert Snr | Slap |
| 41 | 808 Tom 2 | Real Tom 6 | Brash Tom 2 | Timpani | ScratchPush [EXC7] |
| 42 | TR-808 CHH [EXC1] | Close HiHat2 [EXC1] | Close HiHat3 [EXC1] | Timpani | ScratchPull [EXC7] |
| 43 | 808 Tom 2 | Real Tom 6 | Brash Tom 2 | Timpani | Sticks |
| 44 | 808__chh [EXC1] | Pedal HiHat2 [EXC1] | Pedal HiHat3 [EXC1] | Timpani | SquareClick |
| 45 | 808 Tom 2 | Real Tom 4 | Brash Tom 2 | Timpani | Mtrnm.Click |
| 46 | TR-808 OHH [EXC1] | Open HiHat2 [EXC1] | Open HiHat3 [EXC1] | Timpani | Mtrnm. Bell |
| 47 | 808 Tom 2 | Real Tom 4 | Brash Tom 2 | Timpani | Gt.FretNoiz |
| C3 48 | 808 Tom 2 | Real Tom 1 | Brash Tom 2 | Timpani | Gt.CutNoise |
| 49 | 808 Crash | Crash Cym.1 | Crash Cym.3 | Timpani | Gt.CutNoise |
| 50 | 808 Tom 2 | Real Tom 1 | Brash Tom 2 | Timpani | String Slap |
| 51 | Ride Cymbal | Ride Cymbal | Ride Cymbal2 | Timpani | Fl.KeyClick |
| 52 | ChinaCymbal | ChinaCymbal | ChinaCymbal | Timpani | Laughing |
| 53 | Ride Bell | Ride Bell 3 | Ride Bell 2 | Timpani | Screaming |
| 54 | Tambourine | Tambourine | Tambourine | Tambourine | Punch |
| 55 | Splash Cym. | Splash Cym. | Splash Cym. | Splash Cym. | Heart Beat |
| 56 | 808cowbe | Cowbell | Cowbell | Cowbell | Footsteps |
| 57 | Crash Cym.2 | Crash Cym.2 | Crash Cym.2 | Con.Cymbal2 | Footsteps |
| 58 | Vibraslap | Vibraslap | Vibraslap | Vibraslap | Applause |
| 59 | Ride Cymbal4 | Ride Cymbal4 | Ride Cymbal4 | Concert Cym. | Creaking |
| C4 60 | Bongo High | Bongo High | Bongo High | Bongo High | Door |
| 61 | Bongo Lo | Bongo Lo | Bongo Lo | Bongo Lo | Scratch |
| 62 | 808 Conga | Mute H.Conga | Mute H.Conga | Mute H.Conga | Wind Chimes |
| 63 | 808 Conga | Conga Hi Opn | Conga Hi Opn | Conga Hi Opn | Car-Engine |
| 64 | 808 Conga | Conga Lo Opn | Conga Lo Opn | Conga Lo Opn | Car-Stop |
| 65 | High Timbale | High Timbale | High Timbale | High Timbale | Car-Pass |
| 66 | Low Timbale | Low Timbale | Low Timbale | Low Timbale | Car-Crash |
| 67 | Agogo | Agogo | Agogo | Agogo | Siren |
| 68 | Agogo | Agogo | Agogo | Agogo | Train |
| 69 | Cabasa | Cabasa | Cabasa | Cabasa | Jetplane |
| 70 | 808marac | Maracas | Maracas | Maracas | Helicopter |
| 71 | ShrtWhistle [EXC2] | ShrtWhistle [EXC2] | ShrtWhistle [EXC2] | ShrtWhistle [EXC2] | Starship |
| C5 72 | LongWhistle [EXC2] | LongWhistle [EXC2] | LongWhistle [EXC2] | LongWhistle [EXC2] | Gun Shot |
| 73 | Short Guiro [EXC3] | Short Guiro [EXC3] | Short Guiro [EXC3] | Short Guiro [EXC3] | Machine Gun |
| 74 | Long Guiro [EXC3] | Long Guiro [EXC3] | Long Guiro [EXC3] | Long Guiro [EXC3] | Lasergun |
| 75 | 808clave | Claves | Claves | Claves | Explosion |
| 76 | Woodblock | Woodblock | Woodblock | Woodblock | Dog |
| 77 | Woodblock | Woodblock | Woodblock | Woodblock | HorseGallop |
| 78 | Mute Cuica [EXC4] | Mute Cuica [EXC4] | Mute Cuica [EXC4] | Mute Cuica [EXC4] | Bird |
| 79 | Open Cuica [EXC4] | Open Cuica [EXC4] | Open Cuica [EXC4] | Open Cuica [EXC4] | Rain |
| 80 | MuteTriangl [EXC5] | MuteTriangl [EXC5] | MuteTriangl [EXC5] | MuteTriangl [EXC5] | Thunder |
| 81 | OpenTriangl [EXC5] | OpenTriangl [EXC5] | OpenTriangl [EXC5] | OpenTriangl [EXC5] | Wind |
| 82 | Shaker | Shaker | Shaker | Shaker | Seashore |
| 83 | Jingle Bell | Jingle Bell | Jingle Bell | Jingle Bell | Stream |
| C6 84 | Bell Tree | Bell Tree | Bell Tree | Bell Tree | Bubble |
| 85 | Castanets | Castanets | Castanets | Castanets | ----- |
| 86 | Mute Surdo [EXC6] | Mute Surdo [EXC6] | Mute Surdo [EXC6] | Mute Surdo [EXC6] | ----- |
| 87 | Open Surdo [EXC6] | Open Surdo [EXC6] | Open Surdo [EXC6] | Open Surdo [EXC6] | ----- |
| 88 | ----- | ----- | ----- | Applause | ----- |

# Arpeggio Style List

| No. | Arpeggio Style | No. | Arpeggio Style | No. | Arpeggio Style |
|---|---|---|---|---|---|
| 1 | Phrase 1 | 43 | Phrase 11 | 85 | Bassline 8 |
| 2 | Key Backing 1 | 44 | Phrase 12 | 86 | Bassline 9 |
| 3 | Pop Piano 1 | 45 | Phrase 13 | 87 | Bassline 10 |
| 4 | Pop Piano 2 | 46 | Phrase 14 | 88 | Bassline 11 |
| 5 | Phrase 2 | 47 | Phrase 15 | 89 | Bassline 12 |
| 6 | Phrase 3 | 48 | Phrase 16 | 90 | Bassline 13 |
| 7 | Single Note 1 | 49 | Phrase 17 | 91 | Bassline 14 |
| 8 | Single Note 2 | 50 | Phrase 18 | 92 | Bassline 15 |
| 9 | Rock Keys | 51 | Phrase 19 | 93 | Bassline 16 |
| 10 | Rock Shuffle | 52 | Phrase 20 | 94 | Salsa 3 |
| 11 | Blues Shuffle | 53 | Key Backing 2 | 95 | Pop Harp |
| 12 | Blues | 54 | Key Backing 3 | 96 | R&B Harp |
| 13 | Salsa 1 | 55 | Key Backing 4 | 97 | Synth 1 |
| 14 | Salsa 2 | 56 | Key Backing 5 | 98 | Synth 2 |
| 15 | Fast Bossa | 57 | Key Backing 6 | 99 | Synth 3 |
| 16 | Ballad Keys | 58 | Key Backing 7 | 100 | Synth 4 |
| 17 | Triplet Keys | 59 | Key Backing 8 | 101 | Synth 5 |
| 18 | Bossa Gtr | 60 | Key Backing 9 | 102 | Synth 6 |
| 19 | Synth Brass 1 | 61 | Key Backing 10 | 103 | Synth 7 |
| 20 | Synth Brass 2 | 62 | Key Backing 11 | 104 | Seq Pattern 1 |
| 21 | Jazz Strum | 63 | Key Backing 12 | 105 | Seq Pattern 2 |
| 22 | Pop Strum | 64 | Key Backing 13 | 106 | Seq Pattern 3 |
| 23 | Strum 1 | 65 | Key Backing 14 | 107 | Seq Pattern 4 |
| 24 | Strum 2 | 66 | Key Backing 15 | 108 | Seq Pattern 5 |
| 25 | Guitar Arp 1 | 67 | Key Backing 16 | 109 | Seq Pattern 6 |
| 26 | Guitar Arp 2 | 68 | Key Backing 17 | 110 | Seq Pattern 7 |
| 27 | Guitar Arp 3 | 69 | Key Backing 18 | 111 | Seq Pattern 8 |
| 28 | Gtr Backing 1 | 70 | 5th Bass | 112 | Seq Pattern 9 |
| 29 | Gtr Backing 2 | 71 | 8th Rock | 113 | Seq Pattern 10 |
| 30 | Gtr Backing 3 | 72 | Boogie Bass | 114 | Seq Pattern 11 |
| 31 | Gtr Backing 4 | 73 | Shuffle D Stop | 115 | Seq Pattern 12 |
| 32 | Gtr Backing 5 | 74 | Swing Bass | 116 | Seq Pattern 13 |
| 33 | Rock Mute 1 | 75 | Synth Bass 1 | 117 | Seq Pattern 14 |
| 34 | Rock Mute 2 | 76 | Synth Bass 2 | 118 | Seq Pattern 15 |
| 35 | Rock Mute 3 | 77 | Synth Bass 3 | 119 | Seq Pattern 16 |
| 36 | Phrase 4 | 78 | Bassline 1 | 120 | Seq Pattern 17 |
| 37 | Phrase 5 | 79 | Bassline 2 | 121 | Basic 1 |
| 38 | Phrase 6 | 80 | Bassline 3 | 122 | Basic 2 |
| 39 | Phrase 7 | 81 | Bassline 4 | 123 | Basic 3 |
| 40 | Phrase 8 | 82 | Bassline 5 | 124 | 3 Tone Up |
| 41 | Phrase 9 | 83 | Bassline 6 | 125 | 4 Tone Up |
| 42 | Phrase 10 | 84 | Bassline 7 | 126 | 3 Tone Down |

# Rhythm Pattern List

| No. | Rhythm Pattern | No. | Rhythm Pattern | No. | Rhythm Pattern |
|-----|----------------|-----|----------------|-----|----------------|
| 001 | R&B Pop 1 | 063 | R&B 6 | 125 | Fast Bossa |
| 002 | R&B Pop 2 | 064 | R&B 7 | 126 | Pop Bossa |
| 003 | R&B 1 | 065 | R&B 8 | 127 | Salsa 1 |
| 004 | R&B 2 | 066 | R&B 9 | 128 | Salsa 2 |
| 005 | Shuffle Pop 1 | 067 | R&B 10 | 129 | Samba 1 |
| 006 | Shuffle Pop 2 | 068 | R&B 11 | 130 | Samba 2 |
| 007 | Latin Pop 1 | 069 | R&B 12 | 131 | Rhumba |
| 008 | Latin Pop 2 | 070 | R&B 13 | 132 | Mambo 1 |
| 009 | Jazz Brush 1 | 071 | R&B 14 | 133 | Mambo 2 |
| 010 | Jazz Waltz | 072 | R&B 15 | 134 | Merengue |
| 011 | Ballad 1 | 073 | R&B 16 | 135 | Power Fusion 1 |
| 012 | Ballad 2 | 074 | R&B 17 | 136 | Power Fusion 2 |
| 013 | Rock 1 | 075 | R&B 18 | 137 | Rock 3 |
| 014 | Rock 2 | 076 | Funk 1 | 138 | Rock 4 |
| 015 | Back Beat 1 | 077 | Funk 2 | 139 | Rock 5 |
| 016 | Back Beat 2 | 078 | Funk 3 | 140 | Rock 6 |
| 017 | Elec Dance 1 | 079 | 8Beat Rock 1 | 141 | Rock 7 |
| 018 | Elec Dance 2 | 080 | 8Beat Rock 2 | 142 | Rock 8 |
| 019 | Pop 1 | 081 | 8Beat Rock 3 | 143 | Rock 9 |
| 020 | Pop 2 | 082 | 16Beat Rock 1 | 144 | Rock 10 |
| 021 | Pop 3 | 083 | 16Beat Rock 2 | 145 | Rock 11 |
| 022 | Pop 4 | 084 | Ballad 3 | 146 | Rock 12 |
| 023 | 8Beat Pop 1 | 085 | Piano Ballad | 147 | Rock 13 |
| 024 | 8Beat Pop 2 | 086 | Rockaballad | 148 | Rock 14 |
| 025 | 8Beat Pop 3 | 087 | Blue Grass | 149 | Rock 15 |
| 026 | 8Bt Fusion 1 | 088 | Combo 1 | 150 | Rock 16 |
| 027 | 8Bt Fusion 2 | 089 | Combo 2 | 151 | Rock 17 |
| 028 | Pop Funk 1 | 090 | Fast Swing 1 | 152 | Rock 18 |
| 029 | Pop Funk 2 | 091 | Fast Swing 2 | 153 | Rock 19 |
| 030 | Pop Funk 3 | 092 | Swing 1 | 154 | Rock 20 |
| 031 | Pop Funk 4 | 093 | Swing 2 | 155 | Progressive |
| 032 | Pop Funk 5 | 094 | Swing 3 | 156 | Elec Dance 3 |
| 033 | Pop Funk 6 | 095 | Jazz Brush 2 | 157 | Elec Dance 4 |
| 034 | Pop Funk 7 | 096 | Free Jazz | 158 | Elec Dance 5 |
| 035 | Pop Funk 8 | 097 | Jazz 1 | 159 | Elec Dance 6 |
| 036 | 16Beat Pop 1 | 098 | Jazz 2 | 160 | Elec Dance 7 |
| 037 | 16Beat Pop 2 | 099 | Jazz 3 | 161 | Elec Dance 8 |
| 038 | 16Beat Pop 3 | 100 | Jazz 4 | 162 | Elec Dance 9 |
| 039 | 16Bt Fusion 1 | 101 | Jazz 5 | 163 | Elec Dance 10 |
| 040 | 16Bt Fusion 2 | 102 | Jazz 6 | 164 | Acid Jazz |
| 041 | 16Bt Fusion 3 | 103 | Jazz 7 | 165 | Techno |
| 042 | Shuffle Pop 3 | 104 | Jazz 8 | 166 | Hip Hop |
| 043 | Shuffle Pop 4 | 105 | Jazz 9 | 167 | House |
| 044 | Shuffle Pop 5 | 106 | Jazz 10 | 168 | Jungle |
| 045 | Shuffle Pop 6 | 107 | Blues 1 | 169 | Dance |
| 046 | Shuffle Pop 7 | 108 | Blues 2 | 170 | Pop Waltz 1 |
| 047 | West Coast | 109 | Gospel 1 | 171 | Pop Waltz 2 |
| 048 | Motown | 110 | Gospel 2 | 172 | Pop Waltz 3 |
| 049 | R&B Pop 3 | 111 | Polka 1 | 173 | Pop Waltz 4 |
| 050 | R&B Pop 4 | 112 | Polka 2 | 174 | Simple Waltz 1 |
| 051 | R&B Pop 5 | 113 | Latin Pop 3 | 175 | Simple Waltz 2 |
| 052 | Back Beat 3 | 114 | Latin Pop 4 | 176 | 3/4 Brush |
| 053 | Back Beat 4 | 115 | Latin Pop 5 | 177 | 5/4 Fusion |
| 054 | Back Beat 5 | 116 | Latin Pop 6 | 178 | 5/4 Swing |
| 055 | Back Beat 6 | 117 | Latin Pop 7 | 179 | 5/8 Progress |
| 056 | Back Beat 7 | 118 | Latin Pop 8 | 180 | 6/4 Fusion |
| 057 | Back Beat 8 | 119 | Latin Pop 9 | 181 | 6/8 Progress |
| 058 | Back Beat 9 | 120 | Latin Pop 10 | 182 | 6/8 Swing |
| 059 | Back Beat 10 | 121 | Latin Pop 11 | 183 | 7/4 Fusion |
| 060 | R&B 3 | 122 | Bossa Nova 1 | 184 | 7/4 Swing |
| 061 | R&B 4 | 123 | Bossa Nova 2 | 185 | 7/8 Progress |
| 062 | R&B 5 | 124 | Bossa Nova 3 | | |

# Setup List

No.001–020 "RHY: Setup": These Setups let you enjoy performing with a session-like feel while playing a Rhythm. Be sure to check it out. For more on Rhythms, refer to the **"Playing Rhythm ([RHYTHM/SONG])"** (p. 48).

| No. | Setup Name | No. | Setup Name | No. | Setup Name |
|---|---|---|---|---|---|
| 1 | Piano&Pad 1 | 34 | RHY:R&B Grv4 | 67 | RHY:Jz Funk2 |
| 2 | RHY:Contemp1 | 35 | SX Orchestra | 68 | RHY:Jz Trio4 |
| 3 | RHY:Rock 1 | 36 | RHY:Phaser | 69 | Try! Slider |
| 4 | RHY:R&B Grv1 | 37 | Chamber Orch | 70 | RHY:R&B Grv6 |
| 5 | Piano&Pad 2 | 38 | Paris Street | 71 | RHY:SaxBeats |
| 6 | RHY:LatinPop | 39 | RHY:Jz Trio2 | 72 | RHY:Salsa |
| 7 | RHY:Contemp2 | 40 | RHY:Elec 1 | 73 | RHY:Contemp4 |
| 8 | RHY:Disco 1 | 41 | Touch Orch | 74 | RHY:Elec 3 |
| 9 | GtrArp&Bass | 42 | RHY:Contemp3 | 75 | RHY:Rock 4 |
| 10 | RHY:RckBalad | 43 | RHY:Latin 1 | 76 | RHY:Samba |
| 11 | Bell Pad | 44 | RHY:R&B Grv7 | 77 | Mysterious |
| 12 | RHY:PianoPop | 45 | RHY:Synth/Gt | 78 | RHY:Jz Trio5 |
| 13 | RHY:Dramatic | 46 | RHY:Lead/Brs | 79 | RHY:Blues 2 |
| 14 | RHY:R&B Grv2 | 47 | Large Choir | 80 | E.Piano&Pad2 |
| 15 | RHY:Bossa 1 | 48 | RHY:Elec 2 | 81 | RHY:Trance 4 |
| 16 | RHY:Trance 1 | 49 | RHY:GrvFlute | 82 | RHY:Latin 4 |
| 17 | RHY:Bigband | 50 | Melancholy | 83 | Jumpin' |
| 18 | RHY:R&B Grv5 | 51 | RHY:Hps&Harp | 84 | RHY:Elec 4 |
| 19 | PadpAdpaDp@d | 52 | RHY:Grv Scat | 85 | RHY:R&B Grv3 |
| 20 | RHY:Fairy EP | 53 | RHY:Disco 2 | 86 | RHY:Rock 5 |
| 21 | RHY:Jz Trio1 | 54 | RHY:Jz Trio3 | 87 | RHY:SynSitar |
| 22 | RHY:GrvPiano | 55 | Bright Stack | 88 | RHY:ONDO |
| 23 | 4 Split | 56 | RHY:Trance 3 | 89 | Piano&EPiano |
| 24 | RHY:R&B Bld1 | 57 | RHY:ShuflPop | 90 | Piano&Str. |
| 25 | RHY:Rock 2 | 58 | A Cappella | 91 | RD SETUP |
| 26 | RHY:Trance 2 | 59 | RHY:Grv E.P. | 92 | RD SETUP |
| 27 | OD Organ | 60 | E.Piano&Pad1 | 93 | RD SETUP |
| 28 | RHY:PnoBalad | 61 | RHY:Rock 3 | 94 | RD SETUP |
| 29 | RHY:Bossa 2 | 62 | RHY:Latin 2 | 95 | RD SETUP |
| 30 | RHY:SwingPop | 63 | RHY:Blues 1 | 96 | RD SETUP |
| 31 | RHY:Clav+Org | 64 | RHY:Latin 3 | 97 | RD SETUP |
| 32 | RHY:Jz Funk1 | 65 | RHY:SpacePop | 98 | RD SETUP |
| 33 | RHY:SwingVib | 66 | Piano&Pad 3 | 99 | RD SETUP |

Setup No. 091–100 (RD SETUP) include the "Basic Setup." Use this when creating Setups from scratch.

# Shortcut List

You can easily change settings for the following functions using a number of related buttons.

* *"[A] + [B]" indicates that you are to hold down [A] and press [B].*

| What to do | Operation | Page |
|---|---|---|
| Switching Arpeggio Hold On and Off | [ARPEGGIO] + [CONTROL/ZONE LEVEL] | p. 96 |
| Selecting Zone to Play Arpeggios | [ARPEGGIO] + ZONE SWITCH | p. 96 |
| Changing Transpose setting | [TRANSPOSE] + Key | p. 42 |
| Changing the Keyboard's Split Point | [SPLIT] + Key | p. 39 |
| Panel Lock | [EDIT] + [ENTER] | p. 55 |
| Changing the MFX2 Source | MULTI EFFECTS [ON/OFF] + ZONE SWITCH | p. 86 |
| Setting the Reverb/Chorus Amount for each Part | ZONE SWITCH + REVERB or CHORUS knob | p. 71 |

You can easily call up Edit screens for related parameters for the following functions by holding down [SHIFT] while pressing buttons, turning knobs, or operating other controllers.

* *Example        "Edit: Effects: Reverb Type" indicates the Effects' Reverb Type parameter in Edit screen.*

| What to do | Operation | Page | Page |
|---|---|---|---|
| Switching the Damper Pedal's On/Off | [SHIFT] + Damper Pedal | Zone Info: Damper Pedal Switch | p. 70 |
| Assigning Functions to Pedals | [SHIFT] + FC1/2 | Edit: Control: FC1/FC2 | p. 85 |
| Setting the V-Link | [SHIFT] + [V-LINK] | Edit: V-Link | p. 97 |
| Setting the Sound Control | [SHIFT] + [SOUND CONTROL] | Edit: Sound Control | p. 88 |
| Selecting the Chorus/Delay Type | [SHIFT] + [CHORUS/DELAY] | Edit: Effects: Chorus Type | p. 88 |
| Setting the Chorus Amount (*1) | [SHIFT] + CHORUS Knob | Tone Info: Chorus Amount | p. 71 |
| Selecting the Reverb Type | [SHIFT] + [REVERB] | Edit: Effects: Reverb Type | p. 87 |
| Setting the Reverb Amount (*1) | [SHIFT] + REVERB Knob | Tone Info: Reverb Amount | p. 71 |
| Changing the [CONTROL] knob parameter | [SHIFT] + MULTI EFFECTS [CONTROL] Knob | Edit: Effects: MFX Control | p. 87 |
| Changing the MFX Type | [SHIFT] + MULTI EFFECTS [ON/OFF] | Edit: Effects: MFX Type | p. 87 |
| Changing the Rhythm Patterns | [SHIFT] + [RHYTHM/SONG] | Edit: Rhythm/Arpeggio: Rhythm Pattern | p. 93 |
| Changing the Arpeggio Style | [SHIFT] + [ARPEGGIO] | Edit: Rhythm/Arpeggio: Arpeggio Style | p. 95 |
| Selecting the Tone for each Zone (*1) | [SHIFT] + ZONE SWITCH | Zone Info: Tone | p. 68 |
| Adjusting the Volume for each Zone (*1) | [SHIFT] + ZONE LEVEL Slider | Zone Info: Volume | p. 68 |
| Assigning Functions to Sliders | [SHIFT] + [CONTROL/ZONE LEVEL] | Edit: Control: Slider Assign | p. 85 |
| Loading SETUP Files | [SHIFT] + [SETUP] | Edit: File Utility/USB: Load SETUP File | p. 90 |
| Setting the Transposition for each Tone (*1) | [SHIFT] + [TRANSPOSE] | Tone Info: Coarse Tune | p. 71 |
| Setting the Key Range for each Zone (*1) | [SHIFT] + [SPLIT] | Zone Info: Key Range | p. 69 |
| Turning the Controllers are used to control the Zone On and Off (*1) | [SHIFT] + Bender | Zone Info: Bender Sw | p. 70 |
| | [SHIFT] + Modulation | Zone Info: Modulation Sw | |

* *1:  The INTERNAL zone settings are made while [EXTERNAL/INTERNAL] is set to OFF, the EXTERNAL zone settings are made while [EXTERNAL/INTERNAL] is set to ON.*

# MIDI Implementation

Model:       RD-700SX (Digital Piano)
Date:        Nov. 1, 2004
Version:     1.00

## 1. Receive data

### ■Channel Voice Messages

#### ●Note off

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| 8nH | kkH | vvH |
| 9nH | kkH | 00H |

n = MIDI channel number:        0H - FH (ch.1 - 16)
kk = note number:               00H - 7FH (0 - 127)
vv = note off velocity:         00H - 7FH (0 - 127)

*   Some instruments are not received in Rhythm set.
*   The velocity values of Note Off messages are ignored.

#### ●Note on

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| 9nH | kkH | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
kk = note number:               00H - 7FH (0 - 127)
vv = note on velocity:          01H - 7FH (1 - 127)

#### ●Control Change

##### ❍Bank Select (Controller number 0, 32)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 00H | mmH |
| BnH | 20H | llH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
mm, ll = Bank number:           00 00H - 7F 7FH (bank.1 - bank.16384)

*   Not received when the Rx Bank Select (EDIT:Part Parameter:Rx Bank Select) is OFF.
*   The SETUP, Rhythms, and Tones corresponding to each Bank Select are as follows.
*   The SRX series corresponding to each Bank Select are to see the SRX series owner's manual.

```
BANK SELECT   PROGRAM    GROUP               NUMBER
MSB | LSB     NUMBER
----+-----    ---------  ------------------  ----------
000 |         001 - 128  GM Tone             |
 :  |
032 |         001 - 128  GM Tone             |
085 | 000     001 - 100  SETUP               001 - 100
086 | 064     001 - 005  Rhythm Set          219 - 223
087 | 064     001 - 020  Tone (PIANO)        001 - 020
    | 065     001 - 021  Tone (E.PIANO)      021 - 041
    | 066     001 - 021  Tone (CALV/MALLET)  042 - 062
    | 067     001 - 020  Tone (ORGAN)        073 - 092
    | 068     001 - 022  Tone (STRINGS)      093 - 114
    | 069     001 - 020  Tone (PAD)          115 - 134
    | 070     001 - 038  Tone (GTR/BASS)     135 - 172
    | 071     001 - 024  Tone (BRASS/WINDS)  173 - 196
    | 072     001 - 022  Tone (VOICE/SYNTH)  197 - 218
    |     :
092 | 000 -   001 -      SRX Rhythm          001 -
    |     :
093 | 000 -   001 -      SRX Patch           001 -
    |     :
112 | 000     001 - 010  TW-Organ            063 - 072
120 | 000     001 - 057  GM2 Rhythm          224 - 232
121 | 000 -   001 - 128  GM2 Tone            233 - 488
```

##### ❍Modulation (Controller number 1)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 01H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Modulation depth:          00H - 7FH (0 - 127)

*   Not received when the Rx Modulation (EDIT:Part Parameter:Rx Modulation) is OFF.

##### ❍Portamento Time (Controller number 5)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 05H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Portamento Time:           00H - 7FH (0 - 127)

*   The Portament Time parameter (Tone Info:Portament Time) will change.

##### ❍Data Entry (Controller number 6, 38)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 06H | mmH |
| BnH | 26H | llH |

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = the value of the parameter specified by RPN/NRPN
mm = MSB, ll = LSB

##### ❍Volume (Controller number 7)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 07H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Volume:                    00H - 7FH (0 - 127)

*   Not received when the Rx Volume (EDIT:Part Parameter:Rx Volume) is OFF.
*   The Part Level parameter will change.

##### ❍Panpot (Controller number 10)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 0AH | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Panpot:                    00H - 40H - 7FH (Left - Center - Right),

*   Not received when the Rx Pan (EDIT:Part Parameter:Rx Pan) is OFF.
*   The pan parameter (EDIT:Part Parameter:Pan) will change.

##### ❍Expression (Controller number 11)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 0BH | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Expression:                00H - 7FH (0 - 127)

##### ❍ General Purpose Controller 1 (Controller number 16)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 10H | vvH |

n = MIDI channel number:0H - FH (ch.1 - 16)
vv = Control value:   00H - 7FH (0 - 127)

##### ❍Hold 1 (Controller number 64)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 40H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Control value:             00H - 7FH (0 - 127) 0-63 = OFF, 64-127 = ON

*   Not received when the Rx Hold-1 (EDIT:Part Parameter:Rx Hold-1) is OFF.

##### ❍Portamento (Controller number 65)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 41H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Control value:             00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON

*   The Portamento Sw parameter (Tone Info:Portament Sw) will change.

##### ❍Sostenuto (Controller number 66)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 42H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Control value:             00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON

##### ❍Soft (Controller number 67)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 43H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Control value:             00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON

##### ❍Legato Foot Switch (Controller number 68)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 44H | vvH |

n = MIDI channel number:        0H - FH (ch.1 - 16)
vv = Control value:             00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON

## ○Resonance (Controller number 71)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 47H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv= Resonance value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

*   The Resonanse parameter (Tone Info:Resonance) will change.

## ○Release Time (Controller number 72)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 48H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Release Time value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

*   The Release Time parameter (Tone Info:Release Time) will change.

## ○Attack time (Controller number 73)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 49H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Attack time value (relative change): | | 00H - 7FH (-64 - 0 - +63), |

*   The Attack Time parameter (Tone Info:Attack Time) will change.

## ○Cutoff (Controller number 74)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4AH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Cutoff value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

*   The Cutoff parameter (Tone Info:Cutoff) will change.

## ○Decay Time (Controller number 75)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4BH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Decay Time value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

*   The Decay parameter (Tone Info:Decay) will change.

## ○Vibrato Rate (Controller number 76)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4CH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Vibrato Rate value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

## ○Vibrato Depth (Controller number 77)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4DH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Vibrato Depth Value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

## ○Vibrato Delay (Controller number 78)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4EH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Vibrato Delay value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

## ○Portamento Control (Controller number 84)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 54H | kkH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| kk = source note number: | | 00H - 7FH (0 - 127) |

*   A Note-on received immediately after a Portamento Control message will change continuously in pitch, starting from the pitch of the Source Note Number.
*   If a voice is already sounding for a note number identical to the Source Note Number, this voice will continue sounding (i.e., legato) and will, when the next Note-on is received, smoothly change to the pitch of that Note-on.
*   The rate of the pitch change caused by Portamento Control is determined by the Portamento Time value.

## ○Effect 1 (Reverb Send Level) (Controller number 91)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5BH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Reverb Send Level: | | 00H - 7FH (0 - 127) |

*   The Reverb Amount parameter (Tone Info:Reverb Amount) will change.

## ○Effect 3 (Chorus Send Level) (Controller number 93)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5DH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Chorus Send Level: | | 00H - 7FH (0 - 127) |

*   The Chorus Amount parameter (Tone Info:Chorus Amount) will change.

## ○RPN MSB/LSB (Controller number 100, 101)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 65H | mmH |
| BnH | 64H | llH |
| n = MIDI channel number: 0H - FH (ch.1 - 16) | | |
| mm = upper byte (MSB) of parameter number specified by RPN | | |
| ll = lower byte (LSB) of parameter number specified by RPN | | |

<<< RPN >>>

Control Changes include RPN (Registered Parameter Numbers), which are extended.
When using RPNs, first RPN (Controller numbers 100 and 101; they can be sent in any order) should be sent in order to select the parameter, then
  Data Entry (Controller numbers 6 and 38) should be sent to set the value. Once RPN messages are received, Data Entry messages that is received at the same MIDI channel after that are recognized as changing toward the value of the RPN messages. In order not to make any mistakes, transmitting RPN Null is recommended after setting parameters you need.

This device receives the following RPNs.

| RPN MSB, LSB | Data entry MSB, LSB | Notes |
|---|---|---|
| 00H, 00H | mmH, llH | Pitch Bend Sensitivity |
| | | mm: 00H - 18H (0 - 24 semitones) |
| | | ll: ignored (processed as 00H) |
| | | Up to 2 octave can be specified in semitone steps. |
| | | *   The Bend Range parameter (Tone Info:Bend Range) will change. |
| 00H, 01H | mmH, llH | Channel Fine Tuning |
| | | mm, ll: 20 00H - 40 00H - 60 00H |
| | | (-4096 x 100 / 8192 - 0 - +4096 x 100 / 8192 cent) |
| | | *   The Fine Tune parameter (Tone Info:Fine Tune) will change. |
| 00H, 02H | mmH, llH | Channel Coarse Tuning |
| | | mm: 10H - 40H - 70H (-48 - 0 - +48 semitones) |
| | | ll: ignored (processed as 00H) |
| | | *   The Coarse Tune parameter (Tone Info:Coarse Tune) will change. |
| 00H, 05H | mmH, llH | Modulation Depth Range |
| | | mm, ll: 00 00H - 06 00H ( 0 - 16384 * 600 / 16384 cent) |
| 7FH, 7FH | ---, --- | RPN null |
| | | RPN and NRPN will be set as "unspecified." Once this setting has been made, subsequent Parameter values that were previously set will not change. |
| | | mm, ll: ignored |

## ●Program Change

| Status | 2nd byte |
|---|---|
| CnH | ppH |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |
| pp = Program number: | 00H - 7FH (prog.1 - prog.128) |

*   Not received when the Rx Program Change parameter (EDIT:Part Parameter:Rx Program Chanage) is OFF.

# MIDI Implementation

### ●Pitch Bend Change

| Status | 2nd byte | 3rd byte |
|---|---|---|
| EnH | llH | mmH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| mm, ll = Pitch Bend value: | | 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191) |

\* Not received when the Rx Bender parameter (EDIT:Part Parameter:Rx Bender) is OFF.

## ■Channel Mode Messages

### ●All Sounds Off (Controller number 120)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 78H | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

\* When this message is received, all notes currently sounding on the corresponding channel will be turned off.

### ●Reset All Controllers (Controller number 121)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 79H | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

\* When this message is received, the following controllers will be set to their reset values.

| Controller | Reset value |
|---|---|
| Pitch Bend Change | ±0 (center) |
| Channel Pressure | 0 (off) |
| Modulation | 0 (off) |
| Breath Type | 0 (min) |
| Expression | 127 (max) |
| Hold 1 | 0 (off) |
| Sostenuto | 0 (off) |
| Soft | 0 (off) |
| Hold 2 | 0 (off) |
| RPN | unset; previously set data will not change |
| NRPN | unset; previously set data will not change |

### ●All Notes Off (Controller number 123)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 7BH | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

\* When All Notes Off is received, all notes on the corresponding channel will be turned off. However, if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.

### ●OMNI OFF (Controller number 124)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 7CH | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

\* The same processing will be carried out as when All Notes Off is received.

### ●OMNI ON (Controller number 125)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 7DH | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

\* The same processing will be carried out as when All Notes Off is received. OMNI ON will not be turned on.

### ●MONO (Controller number 126)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 7EH | mmH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| mm = mono number: | | 00H - 10H (0 - 16) |

\* The same processing will be carried out as when All Notes Off is received.
\* The Mono/Poly parameter (Tone Info:Mono/Poly) will change.

### ●POLY (Controller number 127)

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 7FH | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

\* The same processing will be carried out as when All Notes Off is received.
\* The Mono/Poly parameter (Tone Info:Mono/Poly) will change.

## ■System Realtime Message

### ●Timing Clock

| Status |
|---|
| F8H |

\* This message will be received if the Clock Source parameter (EDIT:SYSTEM:Clock Source) is MIDI.

### ●Active Sensing

| Status |
|---|
| FEH |

\* When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds 420 ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

## ■System Exclusive Message

| Status | Data byte | Status |
|---|---|---|
| F0H | iiH, ddH, ......,eeH | F7H |
| F0H: | System Exclusive Message status | |

| ii = ID number: | an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. Roland's manufacturer ID is 41H. ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH). |
|---|---|
| dd,...,ee = data: | 00H - 7FH (0 - 127) |
| F7H: | EOX (End Of Exclusive) |

Of the System Exclusive messages received by this device, the Universal Non-realtime messages and the Universal Realtime messages and the Data Request (RQ1) messages and the Data Set (DT1) messages will be set automatically.

### ●Universal Non-realtime System Exclusive Messages

○**Identity Request Message**

| Status | Data byte | Status |
|---|---|---|
| F0H | 7EH, dev, 06H, 01H | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7EH | ID number (Universal Non-realtime Message) |
| dev | Device ID (dev: 10H - 1FH (1 - 32), the initial value is 10H (17).) |
| 06H | Sub ID#1 (General Information) |
| 01H | Sub ID#2 (Identity Request) |
| F7H | EOX (End Of Exclusive) |

\* When this message is received, Identity Reply message (p. 163) will be transmitted.

○**GM1 System On**

| Status | Data byte | Status |
|---|---|---|
| F0H | 7EH, 7FH, 09H, 01H | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7EH | ID number (Universal Non-realtime Message) |
| 7FH | Device ID (Broadcast) |
| 09H | Sub ID#1 (General MIDI Message) |
| 01H | Sub ID#2 (General MIDI 1 On) |
| F7H | EOX (End Of Exclusive) |

\* Not received when the Rx GM/GM2 System On parameter (EDIT:System:Rx GM/GM2 System ON) is OFF.

## ○GM2 System On

| Status | Data byte | Status |
|---|---|---|
| F0H | 7EH 7FH 09H 03H | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7EH | ID number (Universal Non-realtime Message) |
| 7FH | Device ID (Broadcast) |
| 09H | Sub ID#1 (General MIDI Message) |
| 03H | Sub ID#2 (General MIDI 2 On) |
| F7H | EOX (End Of Exclusive) |

\* Not received when the Rx GM/GM2 System On parameter (EDIT:System:Rx GM/GM2 System ON) is OFF.

## ○GM System Off

| Status | Data byte | Status |
|---|---|---|
| F0H | 7EH, 7F, 09H, 02H | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7EH | ID number (Universal Non-realtime Message) |
| 7FH | Device ID (Broadcast) |
| 09H | Sub ID#1 (General MIDI Message) |
| 02H | Sub ID#2 (General MIDI Off) |
| F7H | EOX (End Of Exclusive) |

\* Not received when the Rx GS Reset parameter (EDIT:System:Rx GS Reset) is OFF.

## ●Universal Realtime System Exclusive Messages

### ○Master Volume

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 04H, 01H, llH, mmH | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 04H | Sub ID#1 (Device Control messages) |
| 01H | Sub ID#2 (Master Volume) |
| llH | Master Volume lower byte |
| mmH | Master Volume upper byte |
| F7H | EOX (End Of Exclusive) |

\* The lower byte (llH) of Master Volume will be handled as 00H.
\* The Master Volume parameter (EDIT:System:Master Volume) will change.

### ○Master Fine Tuning

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 04H, 03H, llH, mmH | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 04H | Sub ID#1 (Device Control) |
| 03H | Sub ID#2 (Master Fine Tuning) |
| llH | Master Fine Tuning LSB |
| mmH | Master Fine Tuning MSB |
| F7H | EOX (End Of Exclusive) |

mm, ll: 00 00H - 40 00H - 7F 7FH (-100 - 0 - +99.9 [cents])

## ○Master Coarse Tuning

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 04H, 04H, llH, mmH | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 04H | Sub ID#1 (Device Control) |
| 04H | Sub ID#2 (Master Coarse Tuning) |
| llH | Master Coarse Tuning LSB |
| mmH | Master Coarse Tuning MSB |
| F7H | EOX (End Of Exclusive) |

| ll: | ignored (processed as 00H) |
|---|---|
| mm: | 28H - 40H - 58H (-24 - 0 - +24 [semitones]) |

## ●Global Parameter ControlReverb Parameters

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 04H, 05H, 01H, 01H, | F7H |
| | 01H, 01H, 01H, ppH, vvH | |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 04H | Sub ID#1 (Device Control) |
| 05H | Sub ID#2 (Global Parameter Control) |
| 01H | Slot path length |
| 01H | Parameter ID width |
| 01H | Value width |
| 01H | Slot path MSB |
| 01H | Slot path LSB (Effect 0101: Reverb) |
| ppH | Parameter to be controlled. |
| vvH | Value for the parameter. |
| | pp=0 Reverb Type |
| | vv = 00H Small Room |
| | vv = 01H Medium Room |
| | vv = 02H Large Room |
| | vv = 03H Medium Hall |
| | vv = 04H Large Hall |
| | vv = 08H Plate |
| | pp=1 Reverb Time |
| | vv = 00H - 7FH 0 - 127 |
| F7H | EOX (End Of Exclusive) |

### ○Chorus Parameters

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 04H, 05H, 01H, 01H, | F7H |
| | 01H, 01H, 02H, ppH, vvH | |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 04H | Sub ID#1 (Device Control) |
| 05H | Sub ID#2 (Global Parameter Control) |
| 01H | Slot path length |
| 01H | Parameter width |
| 01H | Value width |
| 01H | Slot path MSB |
| 02H | Slot path LSB (Effect 0102: Chorus) |
| ppH | Parameter to be controlled. |
| vvH | Value for the parameter. |
| | pp=0 Chorus Type |
| | vv=0 Chorus1 |
| | vv=1 Chorus2 |
| | vv=2 Chorus3 |
| | vv=3 Chorus4 |
| | vv=4 FB Chorus |
| | vv=5 Flanger |
| | pp=1 Mod Rate |
| | vv= 00H - 7FH 0 - 127 |
| | pp=2 Mod Depth |
| | vv = 00H - 7FH 0 - 127 |
| | pp=3 Feedback |
| | vv = 00H - 7FH 0 - 127 |

# MIDI Implementation

pp=4 Send To Reverb
vv = 00H - 7FH 0 - 127
F7H          EOX (End Of Exclusive)

## ○Channel Pressure

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 09H, 01H, 0nH, ppH, rrH | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 09H | Sub ID#1 (Controller Destination Setting) |
| 01H | Sub ID#2 (Channel Pressure) |
| 0nH | MIDI Channel (00 - 0F) |
| ppH | Controlled parameter |
| rrH | Controlled range |
| | pp=0 Pitch Control |
| | rr = 28H - 58H -24 - +24 [semitones] |
| | pp=1 Filter Cutoff Control |
| | rr = 00H - 7FH -9600 - +9450 [cents] |
| | pp=2 Amplitude Control |
| | rr = 00H - 7FH 0 - 200% |
| | pp=3 LFO Pitch Depth |
| | rr = 00H - 7FH 0 - 600 [cents] |
| | pp=4 LFO Filter Depth |
| | rr = 00H - 7FH 0 - 2400 [cents] |
| | pp=5 LFO Amplitude Depth |
| | rr = 00H - 7FH 0 - 100% |
| F7H | EOX (End Of Exclusive) |

## ○Controller

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 09H, 03H, 0nH, ccH, ppH, rrH | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7FH | ID number (universal realtime message) |
| 7FH | Device ID (Broadcast) |
| 09H | Sub ID#1 (Controller Destination Setting) |
| 03H | Sub ID#2 (Control Change) |
| 0nH | MIDI Channel (00 - 0F) |
| ccH | Controller number (01 - 1F, 40 - 5F) |
| ppH | Controlled parameter |
| rrH | Controlled range |
| | pp=0 Pitch Control |
| | rr = 28H - 58H -24 - +24 [semitones] |
| | pp=1 Filter Cutoff Control |
| | rr = 00H - 7FH -9600 - +9450 [cents] |
| | pp=2 Amplitude Control |
| | rr = 00H - 7FH 0 - 200% |
| | pp=3 LFO Pitch Depth |
| | rr = 00H - 7FH 0 - 600 [cents] |
| | pp=4 LFO Filter Depth |
| | rr = 00H - 7FH 0 - 2400 [cents] |
| | pp=5 LFO Amplitude Depth |
| | rr = 00H - 7FH 0 - 100% |
| F7H | EOX (End Of Exclusive) |

## ○Scale/Octave Tuning Adjust

| Status | Data byte | Status |
|---|---|---|
| F0H | 7EH, 7FH, 08H, 08H, ffH, ggH, hhH, ssH... | F7H |

| Byte | Explanation |
|---|---|
| F0H | Exclusive status |
| 7EH | ID number (Universal Non-realtime Message) |
| 7FH | Device ID (Broadcast) |
| 08H | Sub ID#1 (MIDI Tuning Standard) |
| 08H | Sub ID#2 (scale/octave tuning 1-byte form) |
| ffH | Channel/Option byte 1 |
| | bits 0 to 1 = channel 15 to 16 |
| | bit 2 to 6 = Undefined |
| ggH | Channel byte 2 |
| | bits 0 to 6 = channel 8 to 14 |
| hhH | Channel byte 3 |
| | bits 0 to 6 = channel 1 to 7 |
| ssH | 12 byte tuning offset of 12 semitones from C to B |
| | 00H = -64 [cents] |

40H =  0 [cents] (equal temperament)
7FH = +63 [cents]
F7H          EOX (End Of Exclusive)

## ○Key-based Instrument Controllers

| Status | Data byte | Status |
|---|---|---|
| F0H | 7FH, 7FH, 0AH, 01H, 0nH, kkH, nnH, vvH | F7H |

| Byte | Explanation | |
|---|---|---|
| F0H | Exclusive status | |
| 7FH | ID number (universal realtime message) | |
| 7FH | Device ID (Broadcast) | |
| 0AH | Sub ID#1 (Key-Based Instrument Control) | |
| 01H | Sub ID#2 (Controller) | |
| 0nH | MIDI Channel (00 - 0F) | |
| kkH | Key Number | |
| nnH | Control Number | |
| vvH | Value | |
| | nn=07H Level | |
| | vv = 00H - 7FH | 0 - 200% (Relative) |
| | nn=0AH | Pan |
| | vv = 00H - 7FH | Left - Right (Absolute) |
| | nn=5BH | Reverb Send |
| | vv = 00H - 7FH | 0 - 127 (Absolute) |
| | nn=5D | Chorus Send |
| | vv = 00H - 7FH | 0 - 127 (Absolute) |
| : | : | |
| F7 | EOX (End Of Exclusive) | |

* This parameter affects drum instruments only.

## ●Data Transmission

This instrument can use exclusive messages to exchange many varieties of internal settings with other devices.
The model ID of the exclusive messages used by this instrument is 00H 00H 03H.

### ○Data Request 1 RQ1 (11H)

This message requests the other device to transmit data. The address and size indicate the type and amount of data that is requested.
When a Data Request message is received, if the device is in a state in which it is able to transmit data, and if the address and size are appropriate, the requested data is transmitted as a Data Set 1 (DT1) message. If the conditions are not met, nothing is transmitted.

| Status | data byte | status |
|---|---|---|
| F0H | 41H, dev, 00H, 00H, 03H, 11H, aaH, bbH, ccH, | F7H |
| | ddH, ssH, ttH, uuH, vvH, sum | |

| Byte | Remarks |
|---|---|
| F0H | Exclusive status |
| 41H | ID number (Roland) |
| dev | Devdevice ID (dev: 10H - 1FH, 7FH) |
| 00H | Model ID #1 (RD-700SX) |
| 00H | Model ID #2 (RD-700SX) |
| 03H | model ID #3 (RD-700SX) |
| 11H | Command ID (RQ1) |
| aaH | Address MSB |
| bbH | Address |
| ccH | Address |
| ddH | Address LSB |
| ssH | Size MSB |
| ttH | Size |
| uuH | Size |
| vvH | Size LSB |
| sum | Checksum |
| F7H | EOX (End Of Exclusive) |

* The size of data that can be transmitted at one time is fixed for each type of data. And data requests must be made with a fixed starting address and size. Refer to the address and size given in **"Parameter Address Map"** (p. 164).
* For the checksum, refer to 168 page.

○**Data set 1 DT1**

This is the message that actually performs data transmission, and is used when you wish to transmit the data.

| Status | Data byte | Status |
|--------|-----------|--------|
| F0H | 41H, dev, 00H, 00H, 03H, 12H, aaH, bbH, | F7H |
| | ccH, ddH, eeH, ... ffH, sum | |

| Byte | Explanation |
|------|-------------|
| F0H | Exclusive status |
| 41H | ID number (Roland) |
| dev | Device ID (dev: 10H - 1FH, 7FH, Initial value is 10H) |
| 00H | Model ID #1 (RD-700SX) |
| 00H | Model ID #2 (RD-700SX) |
| 03H | Model ID #3 (RD-700SX) |
| 12H | Command ID (DT1) |
| aaH | Address MSB: upper byte of the starting address of the data to be sent |
| bbH | Address: upper middle byte of the starting address of the data to be sent |
| ccH | Address: lower middle byte of the starting address of the data to be sent |
| ddH | Address LSB: lower byte of the starting address of the data to be sent. |
| eeH | Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address. |
| : | : |
| ffH | Data |
| sum | Checksum |
| F7H | EOX (End Of Exclusive) |

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in **"Parameter Address Map"** (p. 164).
* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.
* Regarding the checksum, please refer to p. 168.

# 2. Data Transmission

## ■Channel Voice Messages

### ●Note off

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| 8nH | kkH | 40H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| kk = note number: | | 00H - 7FH (0 - 127) |

* Note off message is sent out with the velocity of 40H.

### ●Note on

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| 9nH | kkH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| kk = note number: | | 00H - 7FH (0 - 127) |
| vv = note on velocity: | | 01H - 7FH (1 - 127) |

### ●Control Change

* By selecting a controller number that corresponds to the setting of parameters of controllers (Slider Assign, FC1/2 Pedal Assign), the RD-700SX can transmit any control change message.
* These messages are not transmitted when EXTERNAL Zone Parameter is OFF.

○**Bank Select (Controller number 0, 32)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 00H | mmH |
| BnH | 20H | llH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| mm, ll = Bank number: | | 00 00H - 7F 7FH (bank.1 - bank.16384) |

* When Rec Mode is ON (EDIT:Utility:Rec Setting:Rec Mode), these messages are transmitted when Tone is selected.

○**Modulation (Controller number 1)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 01H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Modulation depth: | | 00H - 7FH (0 - 127) |

* These messages are transmitted when Modulation lever is operated.

○**Portamento Time (Controller number 5)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 05H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Portamento Time: | | 00H - 7FH (0 - 127) |

* These messages are transmitted when Portament Time is set in EXTERNAL Zone.

○**Data Entry (Controller number 6, 38)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 06H | mmH |
| BnH | 26H | llH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| mm, ll = the value of the parameter specified by RPN/NRPN | | |
| mm = MSB, ll = LSB | | |

* These messages are transmitted when Bend Range value is set in EXTERNAL Zone.

○**Volume (Controller number 7)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 07H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Volume: | | 00H - 7FH (0 - 127) |

* These messages are transmitted when ZONE LEVEL Slider is operated.
* These messages are transmitted when Volume value is set in EXTERNAL Zone.

# MIDI Implementation

○**Panpot (Controller number 10)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 0AH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Panpot: | | 00H - 40H - 7FH (Left - Center - Right) |

\* These messages are transmitted when Pan value is set in EXTERNAL Zone.

○**Hold 1 (Controller number 64)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 40H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Control value: | | 00H - 7FH (0 - 127) 0-63 = OFF, 64-127 = ON |

\* These messages are transmitted when Damper pedal is operated.

○**Portamento (Controller number 65)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 41H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Control value: | | 00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON |

\* These messages are transmitted when Portament Swicth is set in EXTERNAL Zone.

○**Sostenuto (Controller number 66)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 42H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Control value: | | 00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON |

○**Soft (Controller number 67)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 43H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Control value: | | 00H - 7FH (0 - 127)  0 - 63 = OFF, 64 - 127 = ON |

○**Resonance (Controller number 71)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 47H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv= Resonance value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

\* These messages are transmitted when Resonance value is set in EXTERNAL Zone.

○**Release Time (Controller number 72)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 48H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Release Time value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

\* These messages are transmitted when Release Time is set in EXTERNAL Zone.

○**Attack Time (Controller number 73)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 49H | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Attack time value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

\* These messages are transmitted when Attack Time is set in EXTERNAL Zone.

○**Cutoff (Controller number 74)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4AH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Cutoff value (relative change): | | 00H - 7FH (-64 - 0 - +63) |

\* These messages are transmitted when Cutoff value is set in EXTERNAL Zone.

○**Decay Time (Controller number 75)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 4BH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Decay Time value (relative change): | | 00H - 40H - 7FH (-64 - 0 - +63) |

\* These messages are transmitted when Decay Time value is set in EXTERNAL Zone.

○**Effect 1 (Reverb Send Level) (Controller number 91)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5BH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Reverb Send Level: | | 00H - 7FH (0 - 127) |

\* These messages are transmitted when Reverb value is set in EXTERNAL Zone.

○**Effect 3 (Chorus Send Level) (Controller number 93)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 5DH | vvH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| vv = Reverb Send Level: | | 00H - 7FH (0 - 127) |

\* These messages are transmitted when Chorus value is set in EXTERNAL Zone.

○**RPN MSB/LSB (Controller number 100, 101)**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| BnH | 65H | mmH |
| BnH | 64H | llH |

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm = upper byte (MSB) of parameter number specified by RPN
ll = lower byte (LSB) of parameter number specified by RPN

<<< RPN >>>
Control Changes include RPN (Registered Parameter Numbers), which are extended.
When using RPNs, first RPN (Controller numbers 100 and 101; they can be sent in any order) should be sent in order to select the parameter, then
  Data Entry (Controller numbers 6 and 38) should be sent to set the value. Once RPN messages are received, Data Entry messages that is received at the same MIDI channel after that are recognized as changing toward the value of the RPN messages. In order not to make any mistakes, transmitting RPN Null is recommended after setting parameters you need.

This device transmits the following RPNs.

| RPN MSB, LSB | Data entry MSB, LSB | Notes |
|---|---|---|
| 00H, 00H | mmH, llH | Pitch Bend Sensitivity |
| | | mm: 00H - 18H (0 - 24 semitones) |
| | | ll: ignored (processed as 00H) |
| 00H, 01H | mmH, llH | Channel Fine Tuning |
| | | mm, ll: 20 00H - 40 00H - 60 00H |
| | | (-4096 x 100 / 8192 - 0 - +4096 x 100 / 8192 cent) |
| 00H, 02H | mmH, llH | Channel Coarse Tuning |
| | | mm: 10H - 40H - 70H (-48 - 0 - +48 semitones) |
| | | ll: ignored (processed as 00H) |
| 00H, 05H | mmH, llH | Modulation Depth Range |
| | | mm, ll: 00 00H - 06 00H |
| | | (0 - 16384 x 600 / 16384 cent) |
| 7FH, 7FH | ---, --- | RPN null |
| | | RPN and NRPN will be set as "unspecified." |
| | | Once this setting has been made, subsequent |

●**Program Change**

| Status | 2nd byte |
|---|---|
| CnH | ppH |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |
| pp = Program number: | 00H - 7FH (prog.1 - prog.128) |

\* When Rec Mode is ON (EDIT:Utility:Rec Setting:Rec Mode), these messages are transmitted when Tone is selected.

●**Pitch Bend Change**

| Status | 2nd byte | 3rd byte |
|---|---|---|
| EnH | llH | mmH |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| mm, ll = Pitch Bend value: | | 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191) |

## ■Channel Mode Messages

### ●MONO (Controller number 126)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 7EH | 01H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |
| mm = mono number: | | 00H - 10H (0 - 16) |

* These messages are transmitted when Mono/Poly value is set to MONO in EXTERNAL Zone.

### ●POLY (Controller number 127)

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH | 7FH | 00H |
| n = MIDI channel number: | | 0H - FH (ch.1 - 16) |

* These messages are transmitted when Mono/Poly value is set to POLY in EXTERNAL Zone.

## ■System Realtime Messages

### ●Timing Clock

Status
F8H

* This message will be received if the Clock Out parameter (EDIT:SYSTEM:Clock Out) is ON.

### ●Start

Status
FAH

* This message is sent on START operation when START/STOP function is selected on Foot Controller.

### ●Stop

Status
FCH

* This message is sent on STOP operation when START/STOP function is selected on Foot Controller.

### ●Active Sensing

Status
FEH

* This message is transmitted at intervals of approximately 250 msec.

## ■System Exclusive Messages

Universal Non-realtime System Exclusive Message" and Data Set 1 (DT1) are the only System Exclusive messages transmitted by the RD-700SX.

### ●Universal Non-realtime System Exclusive Message

#### ○Identity Reply Message

Receiving Identity Request Message, the RD-700SX send this message.

| Status | Data byte | Status |
|--------|-----------|--------|
| F0H | 7EH, dev, 06H, 02H, 41H, 03H, 02H, | F7H |
| | 00H, 00H, 00H, 01H, 00H, 00H | |

| Byte | Explanation |
|------|-------------|
| F0H | Exclusive status |
| 7EH | ID number (Universal Non-realtime Message) |
| dev | Device ID (use the same as the device ID of Roland) |
| 06H | Sub ID#1 (General Information) |
| 02H | Sub ID#2 (Identity Reply) |
| 41H | ID number (Roland) |
| 03H 02H | Device family code (RD-700SX) |
| 00H 00H | Device family number code (RD-700SX) |
| 00H 01H 00H 00H | Software revision level |
| F7H | EOX (End of Exclusive) |

## ●Data Transmission

### ○Data set 1DT1 (12H)

| Status | Data byte | Status |
|--------|-----------|--------|
| F0H | 41H, dev, 00H, 00H, 03H, 12H, aaH, bbH, | F7H |
| | ccH, ddH, eeH, ... ffH, sum | |

| Byte | Explanation |
|------|-------------|
| F0H | Exclusive status |
| 41H | ID number (Roland) |
| dev | Device ID (dev: 00H - 1FH, Initial value is 10H) |
| 00H | Model ID #1 (RD-700SX) |
| 00H | Model ID #2 (RD-700SX) |
| 03H | Model ID #3 (RD-700SX) |
| 12H | Command ID (DT1) |
| aaH | Address MSB: upper byte of the starting address of the data to be sent |
| bbH | Address: upper middle byte of the starting address of the data to be sent |
| ccH | Address: lower middle byte of the starting address of the data to be sent |
| ddH | Address LSB:  lower byte of the starting address of the data to be sent. |
| eeH | Data:  the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address. |
| : | : |
| ffH | Data |
| sum | Checksum |
| F7H | EOX (End Of Exclusive) |

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in "Parameter Address Map" (p. 164).

* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.

## 3. Parameter Address Map

* Transmission of "#" marked address is divided to some packets. For example, ABH in hexadecimal notation will be divided to 0AH and 0BH, and is sent/received in this order.

### 1 RD-700SX (Model ID = 00H 00H 03H)

○**Indivisual Parameters**

* These messages are transmitted when Bulk Dump Temporary funcion is executed.
* Please don't use a parameter or a address marked <Reserved>.
* The parameters for Setup are temporary. If you want to leave the parameters after the RD-700SX is turned off , execute SETUP Write.

```
+---------------------------------------------------------------+
| Start                                                         |
|    Address  |                 Description                     |
|-------------+-------------------------------------------------|
| 01 00 00 00 | System                                          |
|-------------+-------------------------------------------------|
| 10 00 00 00 | SETUP (Temporary)                               |
+---------------------------------------------------------------+
```

* System
```
+---------------------------------------------------------------+
| Start                                                         |
|    Address  |                 Description                     |
|-------------+-------------------------------------------------|
| 01 00 00 00 | System Common                                   |
| 01 00 02 00 | System Sound Control                            |
| 01 00 03 00 | System Favorite SETUP                           |
| 01 00 04 00 | System V-Link                                   |
| 01 00 05 00 | System One Touch Piano (TYPE A)                 |
| 01 00 06 00 | System One Touch Piano (TYPE B)                 |
| 01 00 07 00 | System One Touch EPiano (TYPE A)                |
| 01 00 08 00 | System One Touch EPiano (TYPE B)                |
+---------------------------------------------------------------+
```

* SETUP (Temporary)
```
+---------------------------------------------------------------+
| Start                                                         |
|    Address  |                 Description                     |
|-------------+-------------------------------------------------|
| 10 00 00 00 | SETUP Common                                    |
| 10 00 02 00 | SETUP Rhythm/Arpeggio                           |
| 10 00 03 00 | SETUP MFX (MFX1)                                 |
| 10 00 05 00 | SETUP MFX (MFX2)                                 |
| 10 00 07 00 | SETUP Chorus                                    |
| 10 00 08 00 | SETUP Reverb                                    |
| 10 00 10 00 | SETUP Internal Zone (UPPER1)                    |
| 10 00 11 00 | SETUP Internal Zone (UPPER2)                    |
| 10 00 12 00 | SETUP Internal Zone (LOWER1)                    |
| 10 00 13 00 | SETUP Internal Zone (LOWER2)                    |
| 10 00 14 00 | SETUP External Zone (UPPER1)                    |
| 10 00 15 00 | SETUP External Zone (UPPER2)                    |
| 10 00 16 00 | SETUP External Zone (LOWER1)                    |
| 10 00 17 00 | SETUP External Zone (LOWER2)                    |
| 10 00 20 00 | SETUP Part (Part: 01)                           |
| 10 00 21 00 | SETUP Part (Part: 02)                           |
|      :      |          :                                      |
| 10 00 2F 00 | SETUP Part (Part: 16)                           |
|-------------+-------------------------------------------------|
| 10 00 30 00 | SETUP TW-Organ  1 Backup                        |
| 10 00 31 00 | SETUP TW-Organ  2 Backup                        |
|      :      |          :                                      |
| 10 00 39 00 | SETUP TW-Organ 10 Backup                        |
+---------------------------------------------------------------+
```

* System Common
```
+---------------------------------------------------------------+
| Address  |                 Description                        |
|----------+----------------------------------------------------|
|#01 00 00 00 | 0000 aaaa                                        |
|             | 0000 bbbb                                        |
|             | 0000 cccc                                        |
|             | 0000 dddd  | Master Tune          (24 - 2024)     |
|             |                            -100.0 - 100.0 [cent]  |
|----------+----------------------------------------------------|
| 01 00 00 04 | 000a aaaa | SETUP Control Channel    (0 - 16)    |
|             |                                    1 - 16, OFF   |
|----------+----------------------------------------------------|
| 01 00 00 05 | 0000 000a | Clock Source             (0 - 1)     |
|             |                                    INT, MIDI     |
| 01 00 00 06 | 0000 000a | Clock Out                (0 - 1)     |
|             |                                    OFF, ON        |
|----------+----------------------------------------------------|
| 01 00 00 07 | 0000 000a | Damper Polarity          (0 - 1)     |
|             |                           STANDARD, REVERSE      |
| 01 00 00 08 | 0000 000a | FC1 Polarity             (0 - 1)     |
|             |                           STANDARD, REVERSE      |
| 01 00 00 09 | 0000 000a | FC2 Polarity             (0 - 1)     |
|             |                           STANDARD, REVERSE      |
|----------+----------------------------------------------------|
| 01 00 00 0A | 0000 000a | EQ Mode                  (0 - 1)     |
|             |                             SETUP, SYSTEM        |
|----------+----------------------------------------------------|
| 01 00 00 0B | 0000 000a | Pedal Mode               (0 - 1)     |
|             |                             SETUP, SYSTEM        |
|----------+----------------------------------------------------|
| 01 00 00 0C | 0aaa aaaa | System FC1 Assign        (0 - 108)   |
|             |                 OFF, CC01 - CC31, CC33 - CC95,    |
|             |                 BEND-UP, BEND-DOWN, AFTERTOUCH,   |
|             |                 OCT-UP, OCT-DOWN, START/STOP,     |
|             |             TAP-TEMPO, RHY PLY/STP, ARPEGGIO SW,  |
|             |             MFX ON/OFF, MFX CONTROL, SNG PLY/STP, |
|             |                        SETUP-UP, SETUP-DOWN       |
| 01 00 00 0D | 0aaa aaaa | System FC2 Assign        (0 - 108)   |
|             |                 OFF, CC01 - CC31, CC33 - CC95,    |
|             |                 BEND-UP, BEND-DOWN, AFTERTOUCH,   |
|             |                 OCT-UP, OCT-DOWN, START/STOP,     |
|             |             TAP-TEMPO, RHY PLY/STP, ARPEGGIO SW,  |
|             |             MFX ON/OFF, MFX CONTROL, SNG PLY/STP, |
|             |                        SETUP-UP, SETUP-DOWN       |
|----------+----------------------------------------------------|
| 01 00 00 0E | 0000 000a | Tone Remain              (0 - 1)     |
|             |                                    OFF, ON        |
|----------+----------------------------------------------------|
| 00 00 00 0F | Total Size                                        |
+---------------------------------------------------------------+
```

* System Sound Control
```
+---------------------------------------------------------------+
| Address  |                 Description                        |
|----------+----------------------------------------------------|
| 01 00 02 00 | 0aaa aaaa | Low band Attack time     (0 - 100)   |
| 01 00 02 01 | 0aaa aaaa | Low band Release time    (0 - 100)   |
| 01 00 02 02 | 00aa aaaa | Low band Threshold       (0 - 36)    |
|             |      -36, -35, -34, -33, -32, -31, -30, -29, -28, |
|             |      -27, -26, -25, -24, -23, -22, -21, -20, -19, |
|             |      -18, -17, -16, -15, -14, -13, -12, -11, -10, |
|             |       -9,  -8,  -7,  -6,  -5,  -4,  -3,  -2, -1, 0 [dB] |
| 01 00 02 03 | 0000 aaaa | Low band Ratio           (0 - 13)    |
|             |       1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6,          |
|             |       1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0,          |
|             |                 1:5.6, 1:8.0, 1:16, 1:INF        |
| 01 00 02 04 | 000a aaaa | Low band Level           (0 - 24)    |
|             |        0, 1, 2, 3, 4, 5, 6, 7, 8, 9,             |
|             |       10,11,12,13,14,15,16,17,18,19,             |
|             |                 20,21,22,23,24 [dB]             |
| 01 00 02 05 | 0aaa aaaa | Mid band Attack time     (0 - 100)   |
| 01 00 02 06 | 0aaa aaaa | Mid band Release time    (0 - 100)   |
| 01 00 02 07 | 00aa aaaa | Mid band Threshold       (0 - 36)    |
|             |      -36, -35, -34, -33, -32, -31, -30, -29, -28, |
|             |      -27, -26, -25, -24, -23, -22, -21, -20, -19, |
|             |      -18, -17, -16, -15, -14, -13, -12, -11, -10, |
|             |       -9,  -8,  -7,  -6,  -5,  -4,  -3,  -2, -1, 0 [dB] |
| 01 00 02 08 | 0000 aaaa | Mid band Ratio           (0 - 13)    |
|             |       1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6,          |
|             |       1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0,          |
|             |                 1:5.6, 1:8.0, 1:16, 1:INF        |
| 01 00 02 09 | 000a aaaa | Mid band Level           (0 - 24)    |
|             |        0, 1, 2, 3, 4, 5, 6, 7, 8, 9,             |
|             |       10,11,12,13,14,15,16,17,18,19,             |
|             |                 20,21,22,23,24 [dB]             |
| 01 00 02 0A | 0aaa aaaa | High band Attack time    (0 - 100)   |
| 01 00 02 0B | 0aaa aaaa | High band Release time   (0 - 100)   |
| 01 00 02 0C | 00aa aaaa | High band Threshold      (0 - 36)    |
|             |      -36, -35, -34, -33, -32, -31, -30, -29, -28, |
|             |      -27, -26, -25, -24, -23, -22, -21, -20, -19, |
|             |      -18, -17, -16, -15, -14, -13, -12, -11, -10, |
|             |       -9,  -8,  -7,  -6,  -5,  -4,  -3,  -2, -1, 0 [dB] |
| 01 00 02 0D | 0000 aaaa | High band Ratio          (0 - 13)    |
|             |       1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6,          |
|             |       1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0,          |
|             |                 1:5.6, 1:8.0, 1:16, 1:INF        |
| 01 00 02 0E | 000a aaaa | High band Level          (0 - 24)    |
|             |        0, 1, 2, 3, 4, 5, 6, 7, 8, 9,             |
|             |       10,11,12,13,14,15,16,17,18,19,             |
|             |                 20,21,22,23,24 [dB]             |
| 01 00 02 0F | 0000 0aaa | Split Freq Low           (0 - 6)     |
|             |            200, 250, 315, 400, 500,             |
|             |                      630, 800 [Hz]              |
| 01 00 02 10 | 0000 0aaa | Split Freq High          (0 - 6)     |
|             |          2000, 2500, 3150, 4000, 5000,          |
|             |                    6300, 8000 [Hz]              |
|----------+----------------------------------------------------|
| 00 00 00 11 | Total Size                                        |
+---------------------------------------------------------------+
```

* System Favorite SETUP
```
+---------------------------------------------------------------+
| Address  |                 Description                        |
|----------+----------------------------------------------------|
| 01 00 03 00 | 0aaa aaaa | Favorite SETUP 0 (Bank A)   (0 - 100) |
| 01 00 03 01 | 0aaa aaaa | Favorite SETUP 1 (Bank A)   (0 - 100) |
| 01 00 03 02 | 0aaa aaaa | Favorite SETUP 2 (Bank A)   (0 - 100) |
| 01 00 03 03 | 0aaa aaaa | Favorite SETUP 3 (Bank A)   (0 - 100) |
| 01 00 03 04 | 0aaa aaaa | Favorite SETUP 4 (Bank A)   (0 - 100) |
| 01 00 03 05 | 0aaa aaaa | Favorite SETUP 5 (Bank A)   (0 - 100) |
| 01 00 03 06 | 0aaa aaaa | Favorite SETUP 6 (Bank A)   (0 - 100) |
| 01 00 03 07 | 0aaa aaaa | Favorite SETUP 7 (Bank A)   (0 - 100) |
| 01 00 03 08 | 0aaa aaaa | Favorite SETUP 8 (Bank A)   (0 - 100) |
| 01 00 03 09 | 0aaa aaaa | Favorite SETUP 9 (Bank A)   (0 - 100) |
|             |                                                   |
| 01 00 03 0A | 0aaa aaaa | Favorite SETUP 0 (Bank B)   (0 - 100) |
| 01 00 03 0B | 0aaa aaaa | Favorite SETUP 1 (Bank B)   (0 - 100) |
| 01 00 03 0C | 0aaa aaaa | Favorite SETUP 2 (Bank B)   (0 - 100) |
| 01 00 03 0D | 0aaa aaaa | Favorite SETUP 3 (Bank B)   (0 - 100) |
| 01 00 03 0E | 0aaa aaaa | Favorite SETUP 4 (Bank B)   (0 - 100) |
| 01 00 03 0F | 0aaa aaaa | Favorite SETUP 5 (Bank B)   (0 - 100) |
| 01 00 03 10 | 0aaa aaaa | Favorite SETUP 6 (Bank B)   (0 - 100) |
| 01 00 03 11 | 0aaa aaaa | Favorite SETUP 7 (Bank B)   (0 - 100) |
| 01 00 03 12 | 0aaa aaaa | Favorite SETUP 8 (Bank B)   (0 - 100) |
| 01 00 03 13 | 0aaa aaaa | Favorite SETUP 9 (Bank B)   (0 - 100) |
|             |                                                   |
| 01 00 03 14 | 0aaa aaaa | Favorite SETUP 0 (Bank C)   (0 - 100) |
| 01 00 03 15 | 0aaa aaaa | Favorite SETUP 1 (Bank C)   (0 - 100) |
| 01 00 03 16 | 0aaa aaaa | Favorite SETUP 2 (Bank C)   (0 - 100) |
| 01 00 03 17 | 0aaa aaaa | Favorite SETUP 3 (Bank C)   (0 - 100) |
| 01 00 03 18 | 0aaa aaaa | Favorite SETUP 4 (Bank C)   (0 - 100) |
| 01 00 03 19 | 0aaa aaaa | Favorite SETUP 5 (Bank C)   (0 - 100) |
| 01 00 03 1A | 0aaa aaaa | Favorite SETUP 6 (Bank C)   (0 - 100) |
| 01 00 03 1B | 0aaa aaaa | Favorite SETUP 7 (Bank C)   (0 - 100) |
| 01 00 03 1C | 0aaa aaaa | Favorite SETUP 8 (Bank C)   (0 - 100) |
| 01 00 03 1D | 0aaa aaaa | Favorite SETUP 9 (Bank C)   (0 - 100) |
|             |                                                   |
| 01 00 03 1E | 0aaa aaaa | Favorite SETUP 0 (Bank D)   (0 - 100) |
| 01 00 03 1F | 0aaa aaaa | Favorite SETUP 1 (Bank D)   (0 - 100) |
| 01 00 03 20 | 0aaa aaaa | Favorite SETUP 2 (Bank D)   (0 - 100) |
| 01 00 03 21 | 0aaa aaaa | Favorite SETUP 3 (Bank D)   (0 - 100) |
| 01 00 03 22 | 0aaa aaaa | Favorite SETUP 4 (Bank D)   (0 - 100) |
| 01 00 03 23 | 0aaa aaaa | Favorite SETUP 5 (Bank D)   (0 - 100) |
| 01 00 03 24 | 0aaa aaaa | Favorite SETUP 6 (Bank D)   (0 - 100) |
| 01 00 03 25 | 0aaa aaaa | Favorite SETUP 7 (Bank D)   (0 - 100) |
| 01 00 03 26 | 0aaa aaaa | Favorite SETUP 8 (Bank D)   (0 - 100) |
| 01 00 03 27 | 0aaa aaaa | Favorite SETUP 9 (Bank D)   (0 - 100) |
|----------+----------------------------------------------------|
| 00 00 00 28 | Total Size                                        |
+---------------------------------------------------------------+
```

* System V-Link
```
+---------------------------------------------------------------+
| Address  |                 Description                        |
|----------+----------------------------------------------------|
| 01 00 04 00 | 0000 000a | Switch                   (0 - 1)     |
|             |                                    OFF,ON         |
| 01 00 04 01 | 0000 000a | Mode                     (0 - 1)     |
|             |                                 BANK/PC.NOTE     |
| 01 00 04 02 | 0aaa aaaa | Lowest No                (0 - 127)   |
| 01 00 04 03 | 0000 aaaa | Transmit Channel         (0 - 15)    |
| 01 00 04 04 | 0000 00aa | Transmit Port            (0 - 3)     |
|             |                             All,Out1,Out2,USB    |
| 01 00 04 05 | 0aaa aaaa | Key Range Lower          (0 - 87)    |
| 01 00 04 06 | 0aaa aaaa | Key Range Upper          (0 - 87)    |
| 01 00 04 07 | 0000 000a | Local Control            (0 - 1)     |
|             |                                    OFF, ON        |
|----------+----------------------------------------------------|
| 00 00 00 08 | Total Size                                        |
+---------------------------------------------------------------+
```

* System One Touch Piano
(Type A: t=5 Type B: t=6)

| Address | | Description | |
|---|---|---|---|
| 01 00 0t 00 | 000a aaaa | Tone Number | (0 - 19) |
| 01 00 0t 01 | 00aa aaaa | Stereo Width | (0 - 63) |
| 01 00 0t 02 | 0000 00aa | Nuance | (0 - 2) |
| | | | TYPE1, TYPE2, TYPE3 |
| 01 00 0t 03 | 0000 0aaa | Ambience | (0 - 5) |
| | | | OFF, 1 - 5 |
| 01 00 0t 04 | 0aaa aaaa | Reverb Level | (0 - 127) |
| 01 00 0t 05 | 0000 0aaa | Lid | (0 - 5) |
| | | | 1, 2, 3, 4, 5, 6 |
| 01 00 0t 06 | 0000 00aa | Mic Simulator | (0 - 2) |
| | | | OFF, CONDENSER, DYNAMIC |
| 01 00 0t 07 | 0000 aaaa | Mic Distance | (0 - 10) |
| 01 00 0t 08 | 0000 0aaa | String Resonance Level | (0 - 5) |
| | | | OFF, 1 - 5 |
| 01 00 0t 09 | 0000 000a | EQ Switch | (0 - 1) |
| | | | OFF,ON |
| 01 00 0t 0A | 000a aaaa | EQ Frequency | (0 - 16) |
| | | | 100,125,160,200,250,315, |
| | | | 400,500,630,800,1000,1250, |
| | | | 1600,2000,2500,3150,4000[Hz] |
| 01 00 0t 0B | 0aaa aaaa | EQ Gain | (4 - 124) |
| | | | -12 - +12[dB](0.2dB step) |
| 01 00 0t 0C | 0000 0aaa | EQ Q | (0 - 4) |
| | | | 0.5, 1.0, 2.0, 4.0, 8.0 |
| 01 00 0t 0D | 000a aaaa | Micro Tune Type | (0 - 16) |
| | | | PRST, USER, 1 - 14 |
| 01 00 0t 0E | 0000 aaaa | Sympathetic Resonance Depth | (0 - 10) |
| 01 00 0t 0F | 0000 aaaa | Sympathetic Resonance Pitch | (0 - 10) |
| 01 00 0t 10 | 0000 aaaa | Sympathetic Resonance Level | (0 - 10) |
| 00 00 00 11 | Total Size | | |

* System One Touch E.Piano
(Type A: t=7, Type B: t=8)

| Address | | Description | |
|---|---|---|---|
| 01 00 0t 00 | 000a aaaa | Tone Number | (0 - 20) |
| 01 00 0t 01 | 0000 00aa | Amp Simulator Type | (0 - 2) |
| | | | OFF, EP-AMP, GTR-AMP |
| 01 00 0t 02 | 0000 0aaa | Effect Type | (0 - 4) |
| | | | OFF, CHORUS, TREMOLO, AUTO-WAH, PHASER |
| 01 00 0t 03 | 0aaa aaaa | Effect Depth | (0 - 127) |
| #01 00 0t 04 | 0000 aaaa | | |
| 01 00 0t 05 | 0000 bbbb | Effect Rate | (1 - 200) |
| | | | 0.05 - 10.00 [Hz] |
| 01 00 0t 06 | 0000 000a | EQ Switch | (0 - 1) |
| | | | OFF,ON |
| 01 00 0t 07 | 000a aaaa | EQ Frequency | (0 - 20) |
| | | | 100,125,160,200,250,315, |
| | | | 400,500,630,800,1000,1250, |
| | | | 1600,2000,2500,3150,4000[Hz] |
| 01 00 0t 08 | 0aaa aaaa | EQ Gain | (4 - 124) |
| | | | -12 - +12[dB](0.2dB step) |
| 01 00 0t 09 | 0000 0aaa | EQ Q | (0 - 4) |
| | | | 0.5, 1.0, 2.0, 4.0, 8.0 |
| 00 00 00 09 | Total Size | | |

* SETUP Common

| Address | | Description | |
|---|---|---|---|
| 10 00 00 00 | 0aaa aaaa | SETUP Name 1 | (32 - 127) |
| | | | 32 - 127 [ASCII] |
| 10 00 00 01 | 0aaa aaaa | SETUP Name 2 | (32 - 127) |
| 10 00 00 02 | 0aaa aaaa | SETUP Name 3 | (32 - 127) |
| 10 00 00 03 | 0aaa aaaa | SETUP Name 4 | (32 - 127) |
| 10 00 00 04 | 0aaa aaaa | SETUP Name 5 | (32 - 127) |
| 10 00 00 05 | 0aaa aaaa | SETUP Name 6 | (32 - 127) |
| 10 00 00 06 | 0aaa aaaa | SETUP Name 7 | (32 - 127) |
| 10 00 00 07 | 0aaa aaaa | SETUP Name 8 | (32 - 127) |
| 10 00 00 08 | 0aaa aaaa | SETUP Name 9 | (32 - 127) |
| 10 00 00 09 | 0aaa aaaa | SETUP Name 10 | (32 - 127) |
| 10 00 00 0A | 0aaa aaaa | SETUP Name 11 | (32 - 127) |
| 10 00 00 0B | 0aaa aaaa | SETUP Name 12 | (32 - 127) |
| 10 00 00 0C | 0aaa aaaa | Voice Reserve 1 | (0 - 64) |
| | | | 0 - 63, FULL |
| 10 00 00 0D | 0aaa aaaa | Voice Reserve 2 | (0 - 64) |
| 10 00 00 0E | 0aaa aaaa | Voice Reserve 3 | (0 - 64) |
| 10 00 00 0F | 0aaa aaaa | Voice Reserve 4 | (0 - 64) |
| 10 00 00 10 | 0aaa aaaa | Voice Reserve 5 | (0 - 64) |
| 10 00 00 11 | 0aaa aaaa | Voice Reserve 6 | (0 - 64) |
| 10 00 00 12 | 0aaa aaaa | Voice Reserve 7 | (0 - 64) |
| 10 00 00 13 | 0aaa aaaa | Voice Reserve 8 | (0 - 64) |
| 10 00 00 14 | 0aaa aaaa | Voice Reserve 9 | (0 - 64) |
| 10 00 00 15 | 0aaa aaaa | Voice Reserve 10 | (0 - 64) |
| 10 00 00 16 | 0aaa aaaa | Voice Reserve 11 | (0 - 64) |
| 10 00 00 17 | 0aaa aaaa | Voice Reserve 12 | (0 - 64) |
| 10 00 00 18 | 0aaa aaaa | Voice Reserve 13 | (0 - 64) |
| 10 00 00 19 | 0aaa aaaa | Voice Reserve 14 | (0 - 64) |
| 10 00 00 1A | 0aaa aaaa | Voice Reserve 15 | (0 - 64) |
| 10 00 00 1B | 0aaa aaaa | Voice Reserve 16 | (0 - 64) |
| #10 00 00 1C | 0000 aaaa 0000 bbbb | SETUP Tempo | (10 - 250) |
| #10 00 00 1E | 0000 000a 0000 bbbb 0000 cccc | Upper [PIANO] Tone Number | (0 - 511) |
| #10 00 00 21 | 0000 000a 0000 bbbb 0000 cccc | Upper [E.PIANO] Tone Number | (0 - 511) |
| #10 00 00 24 | 0000 000a 0000 bbbb 0000 cccc | Upper [CLAV/MALLET] Tone Number | (0 - 511) |
| #10 00 00 27 | 0000 000a 0000 bbbb 0000 cccc | Upper [ORGAN] Tone Number | (0 - 511) |
| #10 00 00 2A | 0000 000a 0000 bbbb 0000 cccc | Upper [STRINGS] Tone Number | (0 - 511) |
| #10 00 00 2D | 0000 000a 0000 bbbb 0000 cccc | Upper [PAD] Tone Number | (0 - 511) |
| #10 00 00 30 | 0000 000a 0000 bbbb 0000 cccc | Upper [GTR/BASS] Tone Number | (0 - 511) |
| #10 00 00 33 | 0000 000a 0000 bbbb 0000 cccc | Upper [BRASS/WINDS] Tone Number | (0 - 511) |
| #10 00 00 36 | 0000 000a 0000 bbbb 0000 cccc | Upper [VOICE/SYNTH] Tone Number | (0 - 511) |
| #10 00 00 39 | 0000 000a 0000 bbbb 0000 cccc | Upper [RHY/GM2] Tone Number | (0 - 511) |
| #10 00 00 3C | 0000 000a 0000 bbbb 0000 cccc | Lower [PIANO] Tone Number | (0 - 511) |
| #10 00 00 3F | 0000 000a | | |

| Address | | Description | |
|---|---|---|---|
| | 0000 bbbb 0000 cccc | Lower [E.PIANO] Tone Number | (0 - 511) |
| #10 00 00 42 | 0000 000a 0000 bbbb 0000 cccc | Lower [CLAV/MALLET] Tone Number | (0 - 511) |
| #10 00 00 45 | 0000 000a 0000 bbbb 0000 cccc | Lower [ORGAN] Tone Number | (0 - 511) |
| #10 00 00 48 | 0000 000a 0000 bbbb 0000 cccc | Lower [STRINGS] Tone Number | (0 - 511) |
| #10 00 00 4B | 0000 000a 0000 bbbb 0000 cccc | Lower [PAD] Tone Number | (0 - 511) |
| #10 00 00 4E | 0000 000a 0000 bbbb 0000 cccc | Lower [GTR/BASS] Tone Number | (0 - 511) |
| #10 00 00 51 | 0000 000a 0000 bbbb 0000 cccc | Lower [BRASS/WINDS] Tone Number | (0 - 511) |
| #10 00 00 54 | 0000 000a 0000 bbbb 0000 cccc | Lower [VOICE/SYNTH] Tone Number | (0 - 511) |
| #10 00 00 57 | 0000 000a 0000 bbbb 0000 cccc | Lower [RHY/GM2] Tone Number | (0 - 511) |
| 10 00 00 5A | 0aaa aaaa | FC 1 Assign | (0 - 106) |
| | | | OFF, CC01 - CC31, CC33 - CC95, |
| | | | BEND-UP, BEND-DOWN, AFTERTOUCH, |
| | | | OCT-UP, OCT-DOWN, START/STOP, |
| | | | TAP-TEMPO, RHY PLY/STP, ARPEGGIO SW, |
| | | | MFX ON/OFF, MFX CONTROL, SNG PLY/STP |
| 10 00 00 5B | 0aaa aaaa | FC 2 Assign | (0 - 106) |
| | | | OFF, CC01 - CC31, CC33 - CC95, |
| | | | BEND-UP, BEND-DOWN, AFTERTOUCH, |
| | | | OCT-UP, OCT-DOWN, START/STOP, |
| | | | TAP-TEMPO, RHY PLY/STP, ARPEGGIO SW, |
| | | | MFX ON/OFF, MFX CONTROL, SNG PLY/STP |
| 00 5C | 0000 0aaa | MFX Knob Assgin | (0 - 4) |
| | | | OFF, MFX1-CTRL, MFX2-CTRL, MFX1&2-CTRL, TEMPO |
| 10 00 00 5D | 0000 000a | EQ Switch | (0 - 1) |
| | | | OFF, ON |
| 10 00 00 5E | 0aaa aaaa | EQ Input Gain | (4 - 124) |
| | | | -15 - +15[dB] |
| 10 00 00 5F | 000a aaaa | EQ Low Frequency | (0 - 30) |
| | | | 16,20,25,31,40,50,63,80,100,125,160, |
| | | | 200.250,315,400,500,630,800,1000, |
| | | | 1250,1600,2000,2500,3150,4000,5000, |
| | | | 6300,8000,10000,12500,16000,[Hz] |
| 10 00 00 60 | 0aaa aaaa | EQ Low Gain | (4 - 124) |
| | | | -12.0 - +12.0[dB] (1step = 0.2dB) |
| 10 00 00 61 | 0000 0aaa | EQ Low Q | (0 - 4) |
| | | | 0.5, 1.0, 2.0, 4.0, 8.0 |
| 10 00 00 62 | 000a aaaa | EQ Mid Frequency | (0 - 30) |
| | | | 16,20,25,31,40,50,63,80,100,125,160, |
| | | | 200.250,315,400,500,630,800,1000, |
| | | | 1250,1600,2000,2500,3150,4000,5000, |
| | | | 6300,8000,10000,12500,16000,[Hz] |
| 10 00 00 63 | 0aaa aaaa | EQ Mid Gain | (4 - 124) |
| | | | -12.0 - +12.0[dB] (1step = 0.2dB) |
| 10 00 00 64 | 0000 0aaa | EQ Mid Q | (0 - 4) |
| | | | 0.5, 1.0, 2.0, 4.0, 8.0 |
| 10 00 00 65 | 000a aaaa | EQ High Frequency | (0 - 30) |
| | | | 16,20,25,31,40,50,63,80,100,125,160, |
| | | | 200.250,315,400,500,630,800,1000, |
| | | | 1250,1600,2000,2500,3150,4000,5000, |
| | | | 6300,8000,10000,12500,16000,[Hz] |
| 10 00 00 66 | 0aaa aaaa | EQ High Gain | (4 - 124) |
| | | | -12.0 - +12.0[dB] (1step = 0.2dB) |
| 10 00 00 67 | 0000 0aaa | EQ High Q | (0 - 4) |
| | | | 0.5, 1.0, 2.0, 4.0, 8.0 |
| 10 00 00 68 | 0aaa aaaa | Key Touch Velocity | (0 - 127) |
| | | | REAL, 1 - 127 |
| 10 00 00 69 | 0000 0aaa | Key Touch Curve Type | (1 - 5) |
| | | | SUPER LIGHT, LIGHT, |
| | | | MEDIUM, HEAVY, SUPER HEAVY |
| 10 00 00 6A | 000a aaaa | Key Touch Curve offset | (54 - 73) |
| | | | -10 - +9 |
| 10 00 00 6B | 0aaa aaaa | Key Touch Velocity Delay Sens | (1 - 127) |
| | | | -63 - +63 |
| 10 00 00 6C | 0aaa aaaa | Key Touch Velocity Key Follow | (1 - 127) |
| | | | -63 - +63 |
| 10 00 00 6D | 0000 000a | Slider Select | (0 - 1) |
| | | | ZONE LEVEL, CONTROL |
| 10 00 00 6E | 0aaa aaaa | Slider Assign (UPPER1) | (0 - 97) |
| | | | OFF, CC01 - CC31, CC33 - CC95, |
| | | | BEND-UP, BEND-DOWN, AFTERTOUCH, |
| 10 00 00 6F | 0aaa aaaa | Slider Assign (UPPER2) | (0 - 97) |
| 10 00 00 70 | 0aaa aaaa | Slider Assign (LOWER1) | (0 - 97) |
| 10 00 00 71 | 0aaa aaaa | Slider Assign (LOWER2) | (0 - 97) |
| 10 00 00 72 | 0000 000a | Transpose Switch | (0 - 1) |
| | | | OFF, ON |
| 10 00 00 73 | 0aaa aaaa | Transpose Value | (16 - 112) |
| | | | -48 - +48 |
| 10 00 00 74 | 0000 000a | Split Switch (Internal) | (0 - 1) |
| | | | OFF, ON |
| 10 00 00 75 | 0000 000a | Split Switch (External) | (0 - 1) |
| | | | OFF, ON |
| 10 00 00 76 | 0aaa aaaa | (reserved) | |
| 10 00 00 77 | 0000 000a | MFX Structure | (0 - 1) |
| | | | PARALLEL, SERIAL |
| 10 00 00 78 | 0000 000a | MFX1 Switch | (0 - 1) |
| | | | OFF, ON |
| 10 00 00 79 | 0000 0aaa | MFX1 Source | (0 - 4) |
| | | | FIXED,UPPER1,UPPER2,LOWER1,LOWER2 |
| 10 00 00 7A | 0000 00aa | MFX1 Destination | (0 - 2) |
| | | | SOURCE PART, SAME MFX PART, ALL PART |
| 10 00 00 7B | 0000 000a | MFX2 Switch | (0 - 1) |
| | | | OFF, ON |
| 10 00 00 7C | 0000 0aaa | MFX2 Source | (0 - 4) |
| | | | OFF,UPPER1,UPPER2,LOWER1,LOWER2 |
| 10 00 00 7D | 0000 000a | (reserved) | |
| 10 00 00 7E | 0000 000a | (reserved) | |
| 10 00 00 7F | 0000 aaaa | Harmonic Bar Assign (LOWER2:ON) | (1 - 9) |
| | | | 16',5-1/3',8',4',2-2/3',2',1-3/5',1-1/3',1' |
| 10 00 01 00 | 0000 aaaa | Harmonic Bar Assign (LOWER2:OFF) | (1 - 9) |
| 10 00 01 01 | 0000 aaaa | Harmonic Bar Assign (LOWER1:ON) | (1 - 9) |
| 10 00 01 02 | 0000 aaaa | Harmonic Bar Assign (LOWER1:OFF) | (1 - 9) |
| 10 00 01 03 | 0000 aaaa | Harmonic Bar Assign (UPPER2:ON) | (1 - 9) |
| 10 00 01 04 | 0000 aaaa | Harmonic Bar Assign (UPPER2:OFF) | (1 - 9) |
| 10 00 01 05 | 0000 aaaa | Harmonic Bar Assign (UPPER1:ON) | (1 - 9) |
| 10 00 01 06 | 0000 aaaa | Harmonic Bar Assign (UPPER1:OFF) | (1 - 9) |
| 10 00 01 07 | 0000 000a | (reserved) | |
| 10 00 01 08 | 0000 000a | (reserved) | |
| 10 00 01 09 | 0aaa aaaa | (reserved) | |
| 00 00 01 0A | Total Size | | |

```
* SETUP Rhythm/Arpeggio
+------------------------------------------------------------------------+
|   Address    |                  Description                            |
|--------------+---------------------------------------------------------|
| #10 00 02 00 | 0000 aaaa |                                             |
|              | 0000 bbbb | Rhythm Pattern                 (0 - 184)    |
| 10 00 02 02  | 0aaa aaaa | Rhythm Accent                  (0 - 100)    |
| 10 00 02 03  | 0000 000a | Rhythm Set Change Enable       (0 - 1)      |
| 10 00 02 04  | 000a aaaa | Rhythm MIDI Out Channel        (0 - 16)     |
|              |           |                           OFF,1-16          |
| 10 00 02 05  | 0000 0aaa | Rhythm MIDI Out Port           (0 - 4)      |
|              |           |                       OFF,1,2,USB,ALL       |
| 10 00 02 06  | 0000 0aaa | Arpeggio Zone                  (0 - 4)      |
|              |           |           ALL,UPPER1,UPPER2,LOWER1,LOWER2   |
| 10 00 02 07  | 0000 000a | Arpeggio Switch                (0 - 1)      |
|              |           |                                OFF,ON       |
| 10 00 02 08  | 0aaa aaaa | Arpeggio Stype                 (0 - 127)    |
| 10 00 02 09  | 0000 aaaa | Arpeggio Motif                 (0 - 11)     |
|              |           |    UP(L),UP(H&L).UP(_),DOWN(L),DOWN(L&H),   |
|              |           |    DOWN_,UP&DOWN(L),UP&DOWN(L&H),UP&DOWN(_),|
|              |           |               RANDOM(L),RANDOM(_),RHASE     |
| 10 00 02 0A  | 0aaa aaaa | Arpeggio Accent                (0 - 100)    |
|              |           |                                0 - 100%     |
| 10 00 02 0B  | 0aaa aaaa | Arpeggio Velocity              (0 - 127)    |
|              |           |                           REAL,1 - 127      |
| 10 00 02 0C  | 0000 0aaa | Arpeggio Octave Range          (61 - 67)    |
|              |           |                                -3 - +3      |
| 10 00 02 0D  | 0000 000a | Arpeggio Hold                  (0 - 1)      |
|              |           |                                OFF,ON       |
| 10 00 02 0E  | 0aaa aaaa | Key Range Lower                (0 - 87)     |
| 10 00 02 0F  | 0aaa aaaa | Key Range Upper                (0 - 87)     |
| 10 00 02 10  | 0000 aaaa | Rhythm Arpeggio Grid           (0 - 8)      |
|              |           |      1/4, 1/8, 1/8L, 1/8H, 1/12,            |
|              |           |      1/16, 1/16L, 1/16H, 1/24               |
| 10 00 02 11  | 0000 aaaa | Rhythm Arpeggio Duration       (0 - 9)      |
|              |           |      30, 40, 50, 60, 70, 80, 90, 100, 120, FULL |
|--------------+---------------------------------------------------------|
| 00 00 00 12  | Total Size                                              |
+------------------------------------------------------------------------+

* SETUP MFX 1,2
(MFX1: m=3,n=4, MFX2: m=5,n=6)
+------------------------------------------------------------------------+
|   Address    |                  Description                            |
|--------------+---------------------------------------------------------|
| 10 00 0m 00  | 0aaa aaaa | MFX Type                       (0 - 125)    |
| 10 00 0m 01  | 0aaa aaaa | MFX Dry Send Level             (0 - 127)    |
| 10 00 0m 02  | 0aaa aaaa | MFX Chorus Send Level          (0 - 127)    |
| 10 00 0m 03  | 0aaa aaaa | MFX Reverb Send Level          (0 - 127)    |
| 10 00 0m 04  | 0000 00aa |                                             |
|      :       |     :     | (reserved)                                  |
| 10 00 0m 08  | 000a aaaa |                                             |
|--------------+---------------------------------------------------------|
| #10 00 0m 09 | 0000 aaaa |                                             |
|      :       |     :     | MFX Parameter (1-32)      (12768 - 52768)   |
| #10 00 0n 05 | 0000 aaaa |                           -20000 - +20000   |
|--------------+---------------------------------------------------------|
| 00 00 01 09  | Total Size                                              |
+------------------------------------------------------------------------+

* SETUP Chorus
+------------------------------------------------------------------------+
|   Address    |                  Description                            |
|--------------+---------------------------------------------------------|
| 10 00 07 00  | 0000 aaaa | Chorus Type                    (0 - 3)      |
|              |           |          OFF, CHORUS, DELAY, GM2 CHORUS     |
| 10 00 07 01  | 0aaa aaaa | Chorus Level                   (0 - 127)    |
| 10 00 07 02  | 0000 00aa | (reserved)                                  |
| 10 00 07 03  | 0000 00aa | Chorus Output Select           (0 - 2)      |
|              |           |                       MAIN, REV, MAIN+REV  |
|--------------+---------------------------------------------------------|
| #10 00 07 04 | 0000 aaaa |                                             |
|      :       |     :     | Chorus Parameter (1-20)   (12768 - 52768)   |
| #10 00 07 53 | 0000 aaaa |                           -20000 - +20000   |
|--------------+---------------------------------------------------------|
| 00 00 00 54  | Total Size                                              |
+------------------------------------------------------------------------+

* SETUP Reverb
+------------------------------------------------------------------------+
|   Address    |                  Description                            |
|--------------+---------------------------------------------------------|
| 10 00 08 00  | 0000 aaaa | Reverb Type                    (0 - 7)      |
|              |           |        OFF, REVERB, ROOM, HALL,             |
|              |           |        PLATE, GM2 REVERB, CATHEDRAL         |
| 10 00 08 01  | 0aaa aaaa | Reverb Level                   (0 - 127)    |
| 10 00 08 02  | 0000 00aa | (reserved)                                  |
|--------------+---------------------------------------------------------|
| #10 00 08 03 | 0000 aaaa |                                             |
|      :       |     :     | Reverb Parameter (1-20)   (12768 - 52768)   |
| #10 00 08 52 | 0000 aaaa |                           -20000 - +20000   |
|--------------+---------------------------------------------------------|
| 00 00 00 53  | Total Size                                              |
+------------------------------------------------------------------------+

* SETUP Internal Zone
(UPPER1: z=0)
(UPPER2: z=1)
(LOWER1: z=2)
(LOWER2: z=3)
+------------------------------------------------------------------------+
|   Address    |                  Description                            |
|--------------+---------------------------------------------------------|
| 10 00 1z 00  | 0aaa aaaa | Keyboard Range Lower           (0 - 87)     |
|              |           |                           A0 - UPPER        |
| 10 00 1z 01  | 0aaa aaaa | Keyboard Range Upper           (0 - 87)     |
|              |           |                           LOWER - C8        |
| 10 00 1z 02  | 0aaa aaaa | Velocity Range Lower           (1 - 127)    |
| 10 00 1z 03  | 0aaa aaaa | Velocity Range Upper           (1 - 127)    |
| 10 00 1z 04  | 0aaa aaaa | Velocity Sensitivity           (1 - 127)    |
|              |           |                           -63 - +63         |
| 10 00 1z 05  | 0aaa aaaa | Velocity Max                   (1 - 127)    |
| 10 00 1z 06  | 0aaa aaaa | keyboard Transpose             (16 - 112)   |
|              |           |                           -48 - +48         |
| 10 00 1z 07  | 0000 000a | Zone Switch                    (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 08  | 0000 000a | Damper Switch                  (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 09  | 0000 000a | FC1 Switch                     (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0A  | 0000 000a | FC2 Switch                     (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0B  | 0000 000a | Modulation Switch              (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0C  | 0000 000a | Bender Switch                  (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0D  | 0000 000a | Control Slider Swtch (UPPER1)  (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0E  | 0000 000a | Control Slider Swtch (UPPER2)  (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0F  | 0000 000a | Control Slider Swtch (LOWER1)  (0 - 1)      |
|              |           |                                OFF, ON      |
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| 10 00 1z 10  | 0000 000a | Control Slider Switch (LOWER2) (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 11  | 0000 aaaa | Part Assign                    (0 - 15)     |
|              |           |                                1 - 16       |
|--------------+---------------------------------------------------------|
| 00 00 00 12  | Total Size                                              |
+------------------------------------------------------------------------+

* SETUP External Zone
(UPPER1: z=4)
(UPPER2: z=5)
(LOWER1: z=6)
(LOWER2: z=7)
+------------------------------------------------------------------------+
|   Address    |                  Description                            |
|--------------+---------------------------------------------------------|
| 10 00 1z 00  | 0aaa aaaa | Keyboard Range Lower           (0 - 87)     |
|              |           |                           A0 - UPPER        |
| 10 00 1z 01  | 0aaa aaaa | Keyboard Range Upper           (0 - 87)     |
|              |           |                           LOWER - C8        |
| 10 00 1z 02  | 0aaa aaaa | Velocity Range Lower           (1 - 127)    |
| 10 00 1z 03  | 0aaa aaaa | Velocity Range Upper           (1 - 127)    |
| 10 00 1z 04  | 0aaa aaaa | Velocity Sensitivity           (1 - 127)    |
|              |           |                           -63 - +63         |
| 10 00 1z 05  | 0aaa aaaa | Velocity Max                   (1 - 127)    |
| 10 00 1z 06  | 0aaa aaaa | keyboard Transpose             (16 - 112)   |
|              |           |                           -48 - +48         |
| 10 00 1z 07  | 0000 000a | Zone Switch                    (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 08  | 0000 000a | Damper Switch                  (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 09  | 0000 000a | FC1 Switch                     (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0A  | 0000 000a | FC2 Switch                     (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0B  | 0000 000a | Modulation Switch              (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0C  | 0000 000a | Bender Switch                  (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0D  | 0000 000a | Control Switch (MFX)           (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0E  | 0000 000a | Control Slider Switch (UPPER1) (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 0F  | 0000 000a | Control Slider Switch (UPPER2) (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 10  | 0000 000a | Control Slider Switch (LOWER1) (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 11  | 0000 000a | Control Slider Switch (LOWER2) (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 12  | 0000 00aa | Transmit Port                  (0 - 3)      |
|              |           |                       ALL,OUT1,OUT2,USB     |
| 10 00 1z 13  | 0000 aaaa | Transmit Channel               (0 - 15)     |
|              |           |                                1 - 16       |
| 10 00 1z 14  | 0000 000a | Transmit Bank Select MSB Switch (0 - 1)     |
|              |           |                                OFF, ON      |
| 10 00 1z 15  | 0aaa aaaa | Transmit Bank Select MSB (CC# 0) (0 - 127)  |
| 10 00 1z 16  | 0000 000a | Transmit Bank Select LSB Switch (0 - 1)     |
|              |           |                                OFF, ON      |
| 10 00 1z 17  | 0aaa aaaa | Transmit Bank Select LSB (CC# 32) (0 - 127) |
| 10 00 1z 18  | 0000 000a | Transmit Program Change Switch (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 19  | 0aaa aaaa | Transmit Program Change#       (0 - 127)    |
| 10 00 1z 1A  | 0000 000a | Transmit Level Switch          (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 1B  | 0aaa aaaa | Transmit Level (CC# 7)         (0 - 127)    |
| 10 00 1z 1C  | 0000 000a | Transmit Pan Switch            (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 1D  | 0aaa aaaa | Transmit Pan(CC# 10)           (0 - 127)    |
|              |           |                                L64 - R63    |
| 10 00 1z 1E  | 0000 000a | Transmit Coarse Tune Switch    (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 1F  | 0aaa aaaa | Transmit Coarse Tune           (16 - 112)   |
|              |           |                                -48 - +48    |
| 10 00 1z 20  | 0000 000a | Transmit Fine Tune Switch      (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 21  | 0aaa aaaa | Transmit Fine Tune             (14 - 114)   |
|              |           |                                -50 - +50    |
| 10 00 1z 22  | 0000 000a | Transmit Mono/Poly Switch      (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 23  | 0000 00aa | Transmit Mono/Poly             (0 - 1)      |
|              |           |                                MONO, POLY   |
| 10 00 1z 24  | 0000 000a | Transmit Portamento Switch     (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 25  | 0000 000a | Transmit Portamento Switch Value (0 - 1)    |
|              |           |                                OFF, ON      |
| 10 00 1z 26  | 0000 000a | Transmit Portamento Time Switch (0 - 1)     |
|              |           |                                OFF, ON      |
| 10 00 1z 27  | 0aaa aaaa | Transmit Portamento Time       (0 - 127)    |
| 10 00 1z 28  | 0000 000a | Transmit Cutoff Switch         (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 29  | 0aaa aaaa | Transmit Cutoff                (0 - 127)    |
|              |           |                                -64 - +63    |
| 10 00 1z 2A  | 0000 000a | Transmit Resonance Switch      (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 2B  | 0aaa aaaa | Transmit Resonance             (0 - 127)    |
|              |           |                                -64 - +63    |
| 10 00 1z 2C  | 0000 000a | Transmit Attack Time Switch    (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 2D  | 0aaa aaaa | Transmit Attack Time           (0 - 127)    |
|              |           |                                -64 - +63    |
| 10 00 1z 2E  | 0000 000a | Transmit Decay Time Switch     (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 2F  | 0aaa aaaa | Transmit Decay Time            (0 - 127)    |
|              |           |                                -64 - +63    |
| 10 00 1z 30  | 0000 000a | Transmit Release Time Switch   (0 - 1)      |
|              |           |                                OFF, ON      |
| 10 00 1z 31  | 0aaa aaaa | Transmit Release Time          (0 - 127)    |
|              |           |                                -64 - +63    |
| 10 00 1z 32  | 0000 000a | Transmit Pitch Bend Range Switch (0 - 1)    |
|              |           |                                OFF, ON      |
| 10 00 1z 33  | 00aa aaaa | Transmit Pitch Bend Range      (0 - 48)     |
| 10 00 1z 34  | 0000 000a | Transmit Modulation Depth Switch (0 - 1)    |
|              |           |                                OFF, ON      |
| 10 00 1z 35  | 0aaa aaaa | Transmit Modulation Depth      (0 - 127)    |
|              |           |                                0 - 100 Cent |
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+--------------+-----------+--------------------------------+-------------+
| 10 00 1z 36  | 0000 000a | Transmit Chorus Level Switch   |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 1z 37  | 0aaa aaaa | Transmit Chorus Level          |   (0 - 127) |
+--------------+-----------+--------------------------------+-------------+
| 10 00 1z 38  | 0000 000a | Transmit Reverb Level Switch   |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 1z 39  | 0aaa aaaa | Transmit Reverb Level          |   (0 - 127) |
+--------------+-----------+--------------------------------+-------------+
| 10 00 1z 3A  | 0000 000a | Transmit Control Change 1 Switch|    (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 1z 3B  | 0aaa aaaa | Transmit Control Change 1 Number|  (0 - 127) |
| 10 00 1z 3C  | 0aaa aaaa | Transmit Control Change 1 Value |  (0 - 127) |
| 10 00 1z 3D  | 0000 000a | Transmit Control Change 2 Switch|    (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 1z 3E  | 0aaa aaaa | Transmit Control Change 2 Number|  (0 - 127) |
| 10 00 1z 3F  | 0aaa aaaa | Transmit Control Change 2 Value |  (0 - 127) |
+--------------+-----------+--------------------------------+-------------+
| 00 00 00 40  | Total Size|                                |             |
+--------------+-----------+--------------------------------+-------------+
```

```
* SETUP Part
(p: Part Number(0-F) Part1: p=0, Part2: p=1... Part16:p=f)
+--------------+-----------+--------------------------------+-------------+
| Address      |           |  Description                   |             |
+--------------+-----------+--------------------------------+-------------+
| 10 00 2p 00  | 0000 aaaa | Receive Channel                |    (0 - 15) |
|              |           |                                |      1 - 16 |
| 10 00 2p 01  | 0000 000a | Mute Switch                    |     (0 - 1) |
|              |           |                                |    OFF, ON  |
+--------------+-----------+--------------------------------+-------------+
| 10 00 2p 02  | 0aaa aaaa | Tone Bank Select MSB (CC# 0)   |   (0 - 127) |
| 10 00 2p 03  | 0aaa aaaa | Tone Bank Select LSB (CC# 32)  |   (0 - 127) |
| 10 00 2p 04  | 0aaa aaaa | Tone Program Change#           |   (0 - 127) |
+--------------+-----------+--------------------------------+-------------+
| 10 00 2p 05  | 0aaa aaaa | Part Level (CC# 7)             |   (0 - 127) |
| 10 00 2p 06  | 0aaa aaaa | Part Pan (CC# 10)              |   (0 - 127) |
|              |           |                                |   L64 - 63R |
+--------------+-----------+--------------------------------+-------------+
| 10 00 2p 07  | 0aaa aaaa | Coarse Tune                    |  (16 - 112) |
|              |           |                                |   -48 - +48 |
| 10 00 2p 08  | 0aaa aaaa | Fine Tune                      |  (14 - 114) |
|              |           |                                |   -50 - +50 |
| 10 00 2p 09  | 0000 00aa | Mono/Poly                      |     (0 - 2) |
|              |           |               MONO, POLY, MONO/LEGATO          |
| 10 00 2p 0A  | 000a aaaa | Pitch Bend Range               |    (0 - 24) |
| 10 00 2p 0B  | 0000 000a | Portamento Switch              |     (0 - 1) |
|              |           |                                |    OFF, ON  |
|#10 00 2p 0C  | 0000 aaaa |                                |             |
|              | 0000 bbbb | Portamento Time                |   (0 - 127) |
| 10 00 2p 0E  | 0aaa aaaa | Cutoff                         |   (0 - 127) |
|              |           |                                |   -63 - +63 |
| 10 00 2p 0F  | 0aaa aaaa | Resonance                      |   (0 - 127) |
|              |           |                                |   -63 - +63 |
| 10 00 2p 10  | 0aaa aaaa | Attack Time                    |   (0 - 127) |
|              |           |                                |   -63 - +63 |
| 10 00 2p 11  | 0aaa aaaa | Decay Time                     |   (0 - 127) |
|              |           |                                |   -63 - +63 |
| 10 00 2p 12  | 0aaa aaaa | Release Time                   |   (0 - 127) |
|              |           |                                |   -63 - +63 |
+--------------+-----------+--------------------------------+-------------+
| 10 00 2p 13  | 0aaa aaaa | Chorus Amount                  |   (0 - 127) |
| 10 00 2p 14  | 0aaa aaaa | Reverb Amount                  |   (0 - 127) |
| 10 00 2p 15  | 0aaa aaaa | MFX Type                       |   (0 - 125) |
| 10 00 2p 16  | 0000 000a | Part MFX Switch                |     (0 - 1) |
|              |           |                                |    OFF, ON  |
+--------------+-----------+--------------------------------+-------------+
| 10 00 2p 17  | 0000 000a | Receive Bank Select Switch     |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 18  | 0000 000a | Receive Program Change Switch  |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 19  | 0000 000a | Receive Bender Switch          |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 1A  | 0000 000a | Receive Modulation Switch      |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 1B  | 0000 000a | Receive Volume Switch          |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 1C  | 0000 000a | Receive Pan Switch             |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 1D  | 0000 000a | Receive Hold-1 Switch          |     (0 - 1) |
|              |           |                                |    OFF, ON  |
| 10 00 2p 1E  | 0000 000a | Receive Expression             |     (0 - 1) |
|              |           |                                |    OFF, ON  |
+--------------+-----------+--------------------------------+-------------+
| 00 00 00 1F  | Total Size|                                |             |
+--------------+-----------+--------------------------------+-------------+
```

```
* SETUP ToneWheel Backup
(t: ToneWheel Number, ToneWheel 1: t=0..ToneWheel 10: t=9)
+--------------+-----------+--------------------------------+-------------+
| Address      |           |  Description                   |             |
+--------------+-----------+--------------------------------+-------------+
| 10 00 3t 00  | 0000 00aa | Percussion Harmonic            |     (0 - 2) |
|              |           |                                | OFF, 2ND, 3RD|
| 10 00 3t 01  | 0000 000a | Percussion Decay               |     (0 - 1) |
|              |           |                                | SLOW, FAST  |
| 10 00 3t 02  | 0000 aaaa | Harmonic Bar 16'               |     (0 - 8) |
| 10 00 3t 03  | 0000 aaaa | Harmonic Bar 5-1/3'            |     (0 - 8) |
| 10 00 3t 04  | 0000 aaaa | Harmonic Bar 8'                |     (0 - 8) |
| 10 00 3t 05  | 0000 aaaa | Harmonic Bar 4'                |     (0 - 8) |
| 10 00 3t 06  | 0000 aaaa | Harmonic Bar 2-2/3'            |     (0 - 8) |
| 10 00 3t 07  | 0000 aaaa | Harmonic Bar 2'                |     (0 - 8) |
| 10 00 3t 08  | 0000 aaaa | Harmonic Bar 1-3/5'            |     (0 - 8) |
| 10 00 3t 09  | 0000 aaaa | Harmonic Bar 1-1/3'            |     (0 - 8) |
| 10 00 3t 0A  | 0000 aaaa | Harmonic Bar 1'                |     (0 - 8) |
+--------------+-----------+--------------------------------+-------------+
| 00 00 00 0B  | Total Size|                                |             |
+--------------+-----------+--------------------------------+-------------+
```

## ■Decimal and Hexadecimal Table

(An "H" is appended to the end of numbers in hexadecimal notation.)

In MIDI documentation, data values and addresses/sizes of Exclusive messages, etc. are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers.

| D | H | D | H | D | H | D | H |
|---|---|---|---|---|---|---|---|
| 0 | 00H | 32 | 20H | 64 | 40H | 96 | 60H |
| 1 | 01H | 33 | 21H | 65 | 41H | 97 | 61H |
| 2 | 02H | 34 | 22H | 66 | 42H | 98 | 62H |
| 3 | 03H | 35 | 23H | 67 | 43H | 99 | 63H |
| 4 | 04H | 36 | 24H | 68 | 44H | 100 | 64H |
| 5 | 05H | 37 | 25H | 69 | 45H | 101 | 65H |
| 6 | 06H | 38 | 26H | 70 | 46H | 102 | 66H |
| 7 | 07H | 39 | 27H | 71 | 47H | 103 | 67H |
| 8 | 08H | 40 | 28H | 72 | 48H | 104 | 68H |
| 9 | 09H | 41 | 29H | 73 | 49H | 105 | 69H |
| 10 | 0AH | 42 | 2AH | 74 | 4AH | 106 | 6AH |
| 11 | 0BH | 43 | 2BH | 75 | 4BH | 107 | 6BH |
| 12 | 0CH | 44 | 2CH | 76 | 4CH | 108 | 6CH |
| 13 | 0DH | 45 | 2DH | 77 | 4DH | 109 | 6DH |
| 14 | 0EH | 46 | 2EH | 78 | 4EH | 110 | 6EH |
| 15 | 0FH | 47 | 2FH | 79 | 4FH | 111 | 6FH |
| 16 | 10H | 48 | 30H | 80 | 50H | 112 | 70H |
| 17 | 11H | 49 | 31H | 81 | 51H | 113 | 71H |
| 18 | 12H | 50 | 32H | 82 | 52H | 114 | 72H |
| 19 | 13H | 51 | 33H | 83 | 53H | 115 | 73H |
| 20 | 14H | 52 | 34H | 84 | 54H | 116 | 74H |
| 21 | 15H | 53 | 35H | 85 | 55H | 117 | 75H |
| 22 | 16H | 54 | 36H | 86 | 56H | 118 | 76H |
| 23 | 17H | 55 | 37H | 87 | 57H | 119 | 77H |
| 24 | 18H | 56 | 38H | 88 | 58H | 120 | 78H |
| 25 | 19H | 57 | 39H | 89 | 59H | 121 | 79H |
| 26 | 1AH | 58 | 3AH | 90 | 5AH | 122 | 7AH |
| 27 | 1BH | 59 | 3BH | 91 | 5BH | 123 | 7BH |
| 28 | 1CH | 60 | 3CH | 92 | 5CH | 124 | 7CH |
| 29 | 1DH | 61 | 3DH | 93 | 5DH | 125 | 7DH |
| 30 | 1EH | 62 | 3EH | 94 | 5EH | 126 | 7EH |
| 31 | 1FH | 63 | 3FH | 95 | 5FH | 127 | 7FH |

D: decimal

H: hexadecimal

* Decimal values such as MIDI channel and program change are listed as one greater than the values given in the above table.
* A 7-bit byte can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128+bb.
* In the case of values which have a ± sign, 00H = -64, 40H = ±0, and 7FH = +63, so that the decimal expression would be 64 less than the value given in the above chart. In the case of two types, 00 00H = -8192, 40 00H = ±0, and 7F 7FH = +8191. For example, if aa bbH were expressed as decimal, this would be aa bbH - 40 00H = aa x 128+bb - 64 x 128.
* Data marked "Use nibbled data" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of a x 16+b.

### <Example1> What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

### <Example2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?

From the preceding table, since 12H = 18 and 34H = 52

18 x 128+52 = 2356

### <Example3> What is the decimal expression of the nibbled value 0A 03 09 0D?

From the preceding table, since 0AH = 10, 03H = 3, 09H = 9, 0DH = 13

((10 x 16+3) x 16+9) x 16+13 = 41885

### <Example4> What is the nibbled expression of the decimal value 1258?

```
16 ) 1258
16 )   78 ...10
16 )    4 ...14
       0 ... 4
```

Since from the preceding table, 0 = 00H, 4 = 04H, 14 = 0EH, 10 = 0AH, the result is: 00 04 0E 0AH.

# MIDI Implementation

## ■Examples of Actual MIDI Messages

### <Example1> 92 3E 5F

9n is the Note-on status, and n is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note-on message with MIDI CH = 3, note number 62 (note name is D4), and velocity 95.

### <Example2> CE 49

CnH is the Program Change status, and n is the MIDI channel number. Since EH = 14 and 49H = 73, this is a Program Change message with MIDI CH = 15, program number 74 (Flute in GS).

### <Example3> EA 00 28

EnH is the Pitch Bend Change status, and n is the MIDI channel number. The 2nd byte (00H = 0) is the LSB and the 3rd byte (28H = 40) is the MSB, but Pitch Bend Value is a signed number in which 40 00H (= 64 x 12+80 = 8192) is 0, so this Pitch Bend Value is 28 00H - 40 00H = 40 x 12+80 - (64 x 12+80) = 5120 - 8192 = -3072
If the Pitch Bend Sensitivity is set to 2 semitones, -8192 (00 00H) will cause the pitch to change -200 cents, so in this case -200 x (-3072) ÷ (-8192) = -75 cents of Pitch Bend is being applied to MIDI channel 11.

### <Example4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F

BnH is the Control Change status, and n is the MIDI channel number. For Control Changes, the 2nd byte is the control number, and the 3rd byte is the value. In a case in which two or more messages consecutive messages have the same status, MIDI has a provision called "running status" which allows the status byte of the second and following messages to be omitted. Thus, the above messages have the following meaning.

| | | | |
|---|---|---|---|
| B3 | 64 00 | MIDI ch.4, lower byte of RPN parameter number: | 00H |
| (B3) | 65 00 | (MIDI ch.4) upper byte of RPN parameter number: | 00H |
| (B3) | 06 0C | (MIDI ch.4) upper byte of parameter value: | 0CH |
| (B3) | 26 00 | (MIDI ch.4) lower byte of parameter value: | 00H |
| (B3) | 64 7F | (MIDI ch.4) lower byte of RPN parameter number: | 7FH |
| (B3) | 65 7F | (MIDI ch.4) upper byte of RPN parameter number: | 7FH |

In other words, the above messages specify a value of 0C 00H for RPN parameter number 00 00H on MIDI channel 4, and then set the RPN parameter number to 7F 7FH.

RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the value indicates semitone units, so a value of 0CH = 12 sets the maximum pitch bend range to ±12 semitones (1 octave). (On GS sound generators the LSB of Pitch Bend Sensitivity is ignored, but the LSB should be transmitted anyway (with a value of 0) so that operation will be correct on any device.)

Once the parameter number has been specified for RPN or NRPN, all Data Entry messages transmitted on that same channel will be valid, so after the desired value has been transmitted, it is a good idea to set the parameter number to 7F 7FH to prevent accidents. This is the reason for the (B3) 64 7F (B3) 65 7F at the end.

It is not desirable for Performance data (such as Standard MIDI File data) to contain many events with running status as given in <Example 4>. This is because if playback is halted during the song and then rewound or fast-forwarded, the sequencer may not be able to transmit the correct status, and the sound generator will then misinterpret the data. Take care to give each event its own status.

It is also necessary that the RPN or NRPN parameter number setting and the value setting be done in the proper order. On some sequencers, events occurring in the same (or consecutive) clock may be transmitted in an order different than the order in which they were received. For this reason it is a good idea to slightly skew the time of each event (about 1 tick for TPQN = 96, and about 5 ticks for TPQN = 480).

* TPQN: Ticks Per Quarter Note

## ■Example of an Exclusive Message and Calculating a Checksum

Roland Exclusive messages (RQ1, DT1) are transmitted with a checksum at the end (before F7) to make sure that the message was correctly received. The value of the checksum is determined by the address and data (or size) of the transmitted Exclusive message.

### ●How to calculate the checksum

(hexadecimal numbers are indicated by "H")
The checksum is a value derived by adding the address, size, and checksum itself and inverting the lower 7 bits.
Here's an example of how the check sum is calculated. We will assume that in the Exclusive message we are transmitting, the address is aa bb cc ddH and the data or size is ee ffH.

aa + bb + cc + dd + ee + ff = sum
sum ÷ 128 = quotient ... remainder
128 - remainder = checksum

### <Example1> Setting CHORUS TYPE to DELAY (DT1)

According to the "Parameter Address Map" (p. 164), the start address of Temporary Setup is 10 00 00 00H, the offset address of CHORUS at Setup is 04 00H, and the address of CHORUS TYPE is 00 00H. Therefore the address of CHORUS TYPE of Setup is;

```
     10 00 00 00H
           07 00H
+)         00 00H
     10 00 07 00H
```

DELAY has the value of 02H.

So the system exclusive message should be sent is;

| F0 | 41 | 10 | 00 00 43 | 12 | 10 00 07 00 | 02 | ?? | F7 |
|----|----|----|----------|----|-------------|------|----------|----|
| (1) | (2) | (3) | (4) | (5) | address | data | checksum | (6) |

(1) Exclusive Status      (2) ID (Roland)      (3) Device ID (17)
(4) Model ID (RD-700SX)    (5) Command ID (DT1)    (6) End of Exclusive

Then calculate the checksum.

10H + 00H + 07H + 00H + 02H = 16 + 0 + 7 + 0 + 2 = 25 (sum)
25 (sum) ÷ 128 = 0 (quotient) ... 25 (remainder)
checksum = 128 - 25 (remainder) = 103 = 67H

This means that F0 41 10 00 43 12 10 00 04 00 02 6A F7 is the message should be sent.

### <Example2> Getting Temporary Performance data (RQ1)

cf.) This operation is the same as Bulk Dump Temporary function in Utility.
According to the "Parameter Address Map" (p. 164), the start address of Temporary Setup is assigned as following:

10 00 00 00H      Setup Common
                 :
10 00 39 00H      Setup Tone Wheel 10 Backup

As the data size of Setup Tone Wheel Back up is 00 00 00 0BH, summation of the size and the start address of Setup Tone Wheel 10 Back up at Temporary Setup will be;

```
     10 00 39 00H
+)   00 00 00 0BH
     10 00 39 0BH
```

And the size that have to be got should be;

```
     10 00 39 0BH
-)   10 00 00 00H
     00 00 39 0BH
```

Therefore the system exclusive message should be sent is;

| F0 | 41 | 10 | 00 00 03 | 11 | 10 00 00 00 | 00 00 39 0B | ?? | F7 |
|----|----|----|----------|----|-------------|-------------|----------|----|
| (1) | (2) | (3) | (4) | (5) | address | data | checksum | (6) |

(1) Exclusive Status      (2) ID (Roland)      (3) Device ID (17)
(4) Model ID (RD-700SX)    (5) Command ID (RQ1)    (6) End of Exclusive

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 00 00 03 11 10 00 00 00 00 00 39 0B 2C F7 to be transmitted.

## ■ASCII Code Table

Setup Name of MIDI data are described the ASCII code in the table below.

| D | H | Char | D | H | Char | D | H | Char |
|----|-----|------|-----|-----|------|-----|-----|------|
| 32 | 20H | SP | 64 | 40H | @ | 96 | 60H | ` |
| 33 | 21H | ! | 65 | 41H | A | 97 | 61H | a |
| 34 | 22H | " | 66 | 42H | B | 98 | 62H | b |
| 35 | 23H | # | 67 | 43H | C | 99 | 63H | c |
| 36 | 24H | $ | 68 | 44H | D | 100 | 64H | d |
| 37 | 25H | % | 69 | 45H | E | 101 | 65H | e |
| 38 | 26H | & | 70 | 46H | F | 102 | 66H | f |
| 39 | 27H | ` | 71 | 47H | G | 103 | 67H | g |
| 40 | 28H | ( | 72 | 48H | H | 104 | 68H | h |
| 41 | 29H | ) | 73 | 49H | I | 105 | 69H | i |
| 42 | 2AH | * | 74 | 4AH | J | 106 | 6AH | j |
| 43 | 2BH | + | 75 | 4BH | K | 107 | 6BH | k |
| 44 | 2CH | , | 76 | 4CH | L | 108 | 6CH | l |
| 45 | 2DH | − | 77 | 4DH | M | 109 | 6DH | m |
| 46 | 2EH | . | 78 | 4EH | N | 110 | 6EH | n |
| 47 | 2FH | / | 79 | 4FH | O | 111 | 6FH | o |
| 48 | 30H | 0 | 80 | 50H | P | 112 | 70H | p |
| 49 | 31H | 1 | 81 | 51H | Q | 113 | 71H | q |
| 50 | 32H | 2 | 82 | 52H | R | 114 | 72H | r |
| 51 | 33H | 3 | 83 | 53H | S | 115 | 73H | s |
| 52 | 34H | 4 | 84 | 54H | T | 116 | 74H | t |
| 53 | 35H | 5 | 85 | 55H | U | 117 | 75H | u |
| 54 | 36H | 6 | 86 | 56H | V | 118 | 76H | v |
| 55 | 37H | 7 | 87 | 57H | W | 119 | 77H | w |
| 56 | 38H | 8 | 88 | 58H | X | 120 | 78H | x |
| 57 | 39H | 9 | 89 | 59H | Y | 121 | 79H | y |
| 58 | 3AH | : | 90 | 5AH | Z | 122 | 7AH | z |
| 59 | 3BH | ; | 91 | 5BH | [ | 123 | 7BH | { |
| 60 | 3CH | < | 92 | 5CH | \ | 124 | 7CH | | |
| 61 | 3DH | = | 93 | 5DH | ] | 125 | 7DH | } |
| 62 | 3EH | > | 94 | 5EH | ^ | | | |
| 63 | 3FH | ? | 95 | 5FH | _ | | | |

D: decimal

H: hexadecimal

\*   "SP" is space.

Digital Piano
Model RD-700SX

# MIDI Implementation Chart

Date: Nov. 1, 2004
Version: 1.00

| Function... | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| Basic Channel | Default | 1–16 | 1–16 | |
| | Changed | 1–16 | 1–16 | Memorized |
| Mode | Default | Mode 3 | Mode 3 | |
| | Messages | Mono, Poly | Mode 3, 4 (M = 1) | *2 |
| | Altered | ************* | | |
| Note Number : | | 0–127 | 0–127 | |
| | True Voice | ************* | 0–127 | |
| Velocity | Note On | O | O | |
| | Note Off | X 8n V=64 | O | |
| After Touch | Key's | X | O *4 | |
| | Channel's | O *5 | O *4 | |
| Pitch Bend | | O | O *1 | |
| Control Change | 0, 32 | O *1 | O *1 | Bank select |
| | 1 | O | O *1 | Modulation |
| | 2 | O *5 | O *5 | Breath type |
| | 4 | O *5 | O *5 | Foot type |
| | 5 | O | O | Portamento time |
| | 6, 38 | O | O | Data entry |
| | 7 | O | O *1 | Volume |
| | 8 | O *5 | O *5 | Balance |
| | 10 | O | O *1 | Panpot |
| | 11 | O *5 | O | Expression |
| | 16 | O *5 | O *5 | General purpose controller 1 |
| | 17 | O *5 | O *5 | General purpose controller 2 |
| | 18 | O *5 | O *5 | General purpose controller 3 |
| | 19 | O *5 | O *5 | General purpose controller 4 |
| | 64 | O | O *1 | Hold 1 |
| | 65 | O | O | Portamento |
| | 66 | O | O | Sostenuto |
| | 67 | O | O | Soft |
| | 68 | O *5 | O *5 | Legato foot switch |
| | 69 | O *5 | O *5 | Hold 2 |
| | 70 | O *5 | O *5 | Sound variation |
| | 71 | O | O | Resonance |

| Function | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| 72 | | O | O | Release time |
| 73 | | O | O | Attack Time |
| 74 | | O | O | Cutoff |
| 75 | | O *5 | O *4 | Decay time |
| 76 | | O *5 | O *4 | Vibrato rate |
| 77 | | O *5 | O *4 | Vibrato depth |
| 78 | | O *5 | O *4 | Vibrato delay |
| 80 | | O *5 | O *5 | General purpose controller 5 |
| 81 | | O *5 | O *5 | General purpose controller 6 |
| 82 | | O *5 | O *5 | General purpose controller 7 |
| 83 | | O *5 | O *5 | General purpose controller 8 |
| 84 | | O *5 | O *5 | Portamento control |
| 91 | | O | O (Reverb) | General purpose effects 1 |
| 92 | | O *5 | O *5 | Tremolo |
| 93 | | O | O (Chorus) | General purpose effects 3 |
| 94 | | O *5 | O *5 | Celeste |
| 95 | | O *5 | O *5 | Phaser |
| 1–31, 33–95 | | O | O | Foot Controller 1/2 |
| 1–31, 33–95 | | O | O | MFX Control |
| 98, 99 | | O | X | NRPN LSB, MSB |
| 100, 101 | | O | X | RPN LSB, MSB |
| 0–127 | | O | X | |
| Program Change | | O *1 | O *1 | Program No. 1–128 |
| | : True Number | ************** | 0–127 | |
| System Exclusive | | O *3 | O *1 | |
| System Common | : Song Position | X | X | |
| | : Song Select | X | X | |
| | : Tune Request | X | X | |
| System Real Time | : Clock | O *1 | O | |
| | : Commands | O | X *1 | |
| Aux Messages | : All Sound Off | X | O (120, 126, 127) | |
| | : Reset All Controllers | X | O | |
| | : Local On/Off | X | X | |
| | : All Notes Off | X | O (123–127) | |
| | : Active Sensing | O | O | |
| | : System Reset | X | X | |

Notes

* 1 O X is selectable.
* 2 Recognized as M=1 even if M≠1.
* 3 Transmits when Data Transfer is executed or RQ1 received.
* 4 GM Mode only.
* 5 Transmits and receives by FC1/2 or MFX Control when these messages are assigned.

Mode 1 : OMNI ON, POLY    Mode 2 : OMNI ON, MONO     O : Yes
Mode 3 : OMNI OFF, POLY   Mode 4 : OMNI OFF, MONO    X : No

# Main Specifications

**RD-700SX: Digital Piano (Conforms to General MIDI 2 System)**

● **Keyboard**

88 keys (Progressive Hammer Action Keyboard)

● **Part**

16 Parts

● **Maximum Polyphony**

128 voices

● **Wave Memory**

128 M bytes (16-bit linear equivalent)

● **Expansion Slots**

Wave Expansion Board SRX Series: 2 slots

● **Tones**

Normal Tones: 208

Tonewheel Organ: 10

General MIDI 2 Tones: 256

Rhythm Sets: 5

General MIDI 2 Rhythm Sets: 9

● **Setups**

100

● **Flash Memory**

Approx. 1 M Bytes (1000 K bytes)

● **Effects**

Multi-Effects: 2 systems, 125 types

Reverb:  6 types

Chorus:  3 types

Sound Control (3-band Compressor)

3-band Digital Equalizer

● **Arpeggiator**

128 styles

● **Rhythm Pattern**

185 patterns

● **Controllers**

Zone Level slider x 4 (Assignable)

Equalizer knobs

Reverb knob

Chorus knob

Multi-Effects Control knob

Pitch Bend/Modulation lever

● **Display**

128 x 64 dots graphic LCD (with backlit)

● **Connectors**

Headphones Jack: Stereo 1/4 inch phone type

Output Jacks (L/MONO, R): 1/4 inch phone type

Output Jacks (L, R): XLR type

Pedal Jacks (DAMPER, FC1, FC2): 1/4 inch TRS phone type

MIDI Connectors (IN, OUT1, OUT2, THRU)

USB Connector (supports file transfer and MIDI)

AC Inlet

● **Power Supply**

AC 117 V, AC 230 V or AC 240 V (50/60 Hz)

AC 220 V (60 Hz)

● **Power Consumption**

12 W

● **Dimensions**

1,414 (W) x 374 (D) x 143 (H) mm

55-11/16 (W) x 14-3/4 (D) x 5-11/16 (H) inches

● **Weight**

24.5 kg / 54 lbs 1 oz

● **Accessories**

Owner's Manual

CD-ROM (RD USB Driver)

Damper Pedal (DP-8)

Power Cord

● **Options**

Wave Expansion Board: SRX Series

Keyboard Stand: KS-17

Pedal Switch: DP-2

Damper Pedal: DP-8, DP-10

Foot Switch: BOSS FS-5U,
           FS-6 (TRS phone jacks cannot be used.)

Expression Pedal: EV-5, EV-7

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

# Index

# Purpose-Oriented Index

This index lists the main setting items relevant to play of the RD-700's keyboard.

*   *[EDIT]: aaa: bbb" indicates the bbb parameter in Edit screen aaa.*

# Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

## AFRICA

**EGYPT**
Al Fanny Trading Office
9, EBN Hagar A1 Askalany Street,
ARD E1 Golf, Heliopolis,
Cairo 11341, EGYPT
TEL: 20-2-417-1828

**REUNION**
Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: (0262) 218-429

**SOUTH AFRICA**
That Other Music Shop(PTY)Ltd.
11 Melle St., Braamfontein,
Johannesbourg,
SOUTH AFRICA
TEL: (011) 403 4105
FAX: (011) 403 1234

Paul Bothner(PTY)Ltd.
Royal Cape Park, Unit 24
Londonderry Road, Ottery 7800
Cape Town, SOUTH AFRICA
TEL: (021) 799 4900

## ASIA

**CHINA**
Roland Shanghai Electronics Co.,Ltd.
5F. No.1500 Pingliang Road
Shanghai 200090, CHINA
TEL: (021) 5580-0800

Roland Shanghai Electronics Co.,Ltd.
(BEIJING OFFICE)
10F. No.18 3 Section Anhuaxili
Chaoyang District Beijing
100011 CHINA
TEL: (010) 6426-5050

Roland Shanghai Electronics Co.,Ltd.
(GUANGZHOU OFFICE)
2/F., No.30 Si You Nan Er Jie
Yi Xiang, Wu Yang Xin Cheng,
Guangzhou 510600, CHINA
TEL: (020) 8736-0428

**HONG KONG**
Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

Parsons Music Ltd.
8th Floor, Railway Plaza, 39
Chatham Road South, T.S.T,
Kowloon, HONG KONG
TEL: 2333 1863

**INDIA**
Rivera Digitec (India) Pvt. Ltd.
409, Nirman Kendra
Mahalaxmi Flats Compound
Off. Dr. Edwin Moses Road,
Mumbai-400011, INDIA
TEL: (022) 2493 9051

**INDONESIA**
PT Citra IntiRama
J1. Cideng Timur No. 15J-150
Jakarta Pusat
INDONESIA
TEL: (021) 6324170

**KOREA**
Cosmos Corporation
1461-9, Seocho-Dong,
Seocho Ku, Seoul, KOREA
TEL: (02) 3486-8855

**MALAYSIA**
Roland Asia Pacific Sdn. Bhd.
45-1, Block C2, Jalan PJU 1/39,
Dataran Prima, 47301 Petaling
Jaya, Selangor, MALAYSIA
TEL: (03) 7805-3263

**PHILIPPINES**
G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

**SINGAPORE**
SWEE LEE MUSIC COMPANY PTE. LTD.
150 Sims Drive,
SINGAPORE 387381
TEL: 6846-3676

**TAIWAN**
ROLAND TAIWAN ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung
Shan N.Road Sec.2, Taipei,
TAIWAN, R.O.C.
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